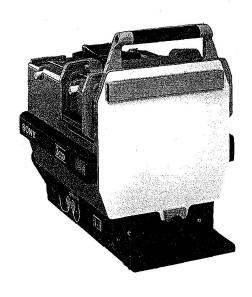
SONY® COLOR VIDEO CAMERA BVP-370P



OPERATION AND MAINTENANCE MANUAL 1st Edition (Revised 11) Serial No. 40001 and Higher

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Table of Contents Inhaltsverzeichnis

Section 1. OPERATION
1-1. Overview 1-1(E)
1-1-1. Features 1-2(E)
1-1-2. File System 1-4(E)
1-2. Camera System Configuration 1-5(E)
1-2-1. Basic Configuration 1-5(E)
1-2-2. Configuration with Optional Accessories 1-6(E)
1-3. Locations and Functions of Parts and
Controls1-7(E)
1-3-1. Rear 1-7(E)
1-3-2. Side Connector Panels 1-14(E)
1-3-3. Front 1-18(E)
1-4. System Setup 1-21(E)
1-4-1. Mounting the Camera on the Tripod 1-21(E)
1-4-2. Attaching the Lens Unit 1-22(E)
1-4-3. Attaching the Viewfinder 1-24(E)
1-5. Adjusting the Angle of the Viewfinder 1-26(E)
1-6. Viewfinder Screen Indications 1-30(E)
1-6-1. Marker Indications 1-30(E)
1-6-2. Character Indications 1-31(E)
1-6-3. Character Indications for Auto Setup 1-35(E)
1-7. Systems Connections 1-37(E)
1-7-1. Connections for Single Camera Operation
in Combination with the CCU-370P 1-37(E)
1-7-2. Connections for Multiple Camera
Operation 1-39(E)
1-7-3. Connectioins for Stand-alone Camera
Operation 1-41 (E)
1-8. Specifications 1-42(E)

Abschnitt 1. BETRIEB	
1-1. Allgemeines	. 1-1(G)
1-1-1. Besondere Merkmale	. 1-2(G)
1-1-2. Datenspeicher-System	. 1-4(G)
1-2. Systemaufbau	. 1-5(G)
1-2-1. Grundkonfiguration	. 1-5(G)
1-2-2. Systemkonfiguration mit	
Sonderzubehörkomponenten	. 1-6(G)
1-3. Lage und Funktion der Teile und	
Bedienelemente	. 1-7(G)
1-3-1. Rückseite	. 1-7(G)
1-3-2. Seitliche Anschluß-Felder	1-14(G)
1-3-3. Vorderseite	1-18(G)
1-4. Aufbau des Systems	1-21(G)
1-4-1. Anbringen des Kamerakopfs auf	
einem Stativ	1-21(G)
1-4-2. Anbringen des Objektivs am	
Kamerakopf	1-22(G)
1-4-3. Anbringen des Suchers an der Kamera	1-24(G)
1-5. Winkeleinstellung des Suchers	1-26(G)
1-6. Anzeigen im Sucher	1-30(G)
1-6-1. Eingeblendete Markierungen	1-30(G)
1-6-2. Textanzeigen auf dem Sucherschiem	1-31(G)
1-6-3. Textmeldungen bei automatischer	
Setup-Operation	1-35(G)
1-7. Systemverkabelung	1-37(G)
1-7-1. Betrieb einer Kamera zusamman mit	
der Kamera-Steuereinheit CCU-370P	1-37(G)
1-7-2. Betrieb mehrerer Kameras	1-39(G)
1-7-3. Einzelbetrieb der Kamera	1-41(G
1-8. Technische Daten	1-42(G)

	Packing and Unpacking2-1	E 1	Preparation5-1
2-1.	Supplied Accessories2-2	5-1.	
2-2.	Supplied Accessories2-2	5-1-	
2-3.	Connectors and Cables 2-4	5-1-	
2-3-		5-1-	
2-3-2		5-1-	
2-4.	Setup2-10	5-2.	Adjustment Items5-6
2-5.	Function of Switches on PC Board2-11		EP 1. Power Supply System Adjustment5-7
2-6.	Use of Supplied Plugs2-13		EP 2. SYNC Signal System Adjustment5-8
2-6-			EP 3. Video Signal System Adjustment ·····5-9
2-6-	2. Use of 6-pin Plug······2-13		EP 4. Detail Signal System Adjustment5-30
2-6-	3. Use of 4-pin Plug2-13		EP 5. Auto Control System Adjustment ······5-48
2-7.	Instance of System Connection2-15		EP 6. VF Interface System Adjustment·····5-54
			EP 7. Triax Interface System Adjustment5-60
3. F	REPLACEMENT OF MAIN PARTS	STE	EP 8. Intercom System Adjustment5-75
		5-3.	
3-1.	Side Panels Opening3-1		Adjustment5-90
3-2.	Replacement of Filter Unit ······3-2	5-4.	Partial Adjustment5-91
3-3.	Replacement of CCD Unit ······3-2	5-4	
3-4.	Replacement of TRIAX Connector ······3-3		for Each Board ······5-91
3-5.	Removal of Power Case Assy3-4	5-4	-2. Main Partial Adjustment Items5-92
3-6.	Replacement of Tally Lamp ······3-4		
		A.	BLOCK DIAGRAMS
4. S	SERVICE INFORMATION		
			Overall Block ······A-1
4-1.	Board Layout·····-4-1		VA-86/VA-131A Board Block······A-6
4-2.	Circuit Description ······4-3		IE-26/26P Block ······A-11
4-3.	Note on Maintenance Service ·····-4-5		PR-130 BlockA-13
4-3-	1. CCD Unit Replacement ······4-5		MS-33 BlockA-16
4-3-			SG-167/167P/167AP BlockA-21
	Detection Circuit4-5		MD-67 Block ······A-23
4-3-			FL-89 BlockA-25
4-3-			AU-129/129P Block ·······A-27
4-3-			AT-54 Block ······A-30
4-3-	·		PS-198 Block ······A-39
4-3-			
4-3-		B.	SEMICONDUCTOR
4-4.	Warning Messages ······4-8		
4-5.	Error Messages in Automatic		
- T =∪.	Adjustment Mode4-8		
4-6.	Self-Diagnosis4-9		
4-0.	Och-Diagnosia	•	

2. INSTALLATION

5. ALIGNMENT

C. SCHEMATIC DIAGRAMS AND BOARD ILLUSTRATIONS

Board Layout C-1

CCD Block (1/2)
TG-62/62P Board
DR-103 Board
CCD Block (2/2)C-10
BI-33 Board
BI-34 Board
BI-40 Board
CN-375 Board
PA-102 Board
PA-164A Board
VA-86 Board/VA-131A Board C-18
IE-26/26P Board
PR-130 Board
MS-33 Board C-68
SG-167/167P/167AP Board C-82
MD-67 Board C-88
FL-89 Board C-94
AU-129/129P Board C-100
AT-54 Board
PS-192/198 Board C-130
Frame Wiring (1/3) C-138
MB-270 Board
Frame Wiring (2/3) C-147
CN-261 Board
CN-390 Board
CN-391 Board
CN-451 Board
LF-15 Board
LP-53 Board
Frame Wiring (3/3) C-153
SW-386 Board
SW-387 Board
SW-388 Board
SW-389 Board
SW-417 Board
SPARE PARTS
Parts Information ······ D-1
Exploded View D-2
Screws D-23
Electrical Parts List····· D-25
D-20

D.

CHANGED PARTS

ł 1 {

Section 1. OPERATION

1-1. Overview

The BVP-370P is a highest performance three-chip CCD color video camera designed for wide use in both studio and outside broadcast applications. It features above all, newly developed 2/3-inch FIT (Frame Interline Transfer) type CCD imagers using HAD (Hole-Accumulated Diode) light sensing elements, and a high resolution as represented by a total of 440,000 picture elements.

The compact and lightweight video camera with low power consumption embodies latest digital, analog and human engineering technologies. It boasts various innovative functions including precise auto setup by state-of-the art microcomputers, as well as ease of operation and handling.

Basically, the BVP-370P is to be connected to the CCU-370P camera control unit using a triaxial cable, and controlled via the CCU-370P, from the MSU-350 master setup unit or a remote control panel of the RCP-3700 series.* In addition to these units, the VCS-350 video selector and a variety of optional accessories are available to configure an optimal camera system for individual applications ranging from program production in studio to OB activities. Sufficient flexibility for as-desired system enhancement in future is another consideration taken in the design of this camera.

^{*} To operate this camera not connected to the CCU-370P camera control unit (stand-alone operation), it is necessary to equip the camera with the BKP-370P standalone kit and RM-3601 remote control box (both optional).

1-1-1. Features

High picture performance

Thanks to the employment of newly developed FIT type HAD CCD image sensors, the vertical smear level of the BVP-370P is extremely low and its flare level much lowered as compared with cameras using conventional types of CCD. Also, two-line image enhancement and many other capabilities matching CCD camera's performance are used for this unit.

High signal-to-noise ratio

A high S/N of 60 dB (typical) has been achieved as a combined result of the employment of top performance CCD and full-scale application of excellent video circuitry and electronic packaging technologies.

Wide dynamic range

The automatic/manual control capabilities for knee point and knee slope enable a natural and sharp image to be obtained at up to 600% of normal light input level.

High sensitivity

A sensitivity of F8 at 2000 lux (typical) has been achieved. When video gain is raised to + 18 dB, a satisfactory output level can be obtained at a minimum subject illuminance of 7.5 lux.

Automatic setup and data filing capabilities

Built-in microcomputers ensure precise and rapid automatic setup adjustments. A filing system is provided to enable adjustment data to be stored in the camera head and recalled at any time to adjust the camera automatically. These capabilities enable the camera to be set up within a short time, and the time required for camera maintenance to be reduced.

Electronic shutter

The operating speed of the BVP-370P's electronic shutter can be changed through six stages. Even a rapidly moving object can be shot to give a clear image by selecting an optimal shutter speed.

Extended Clear Scan ™ 1) (ECS) mode (for serial No.42701 and higher)

You can select an appropriate shutter speed with the built-in electronic shutter as explained above.

Furthermore, in the Extended Clear Scan (ECS) mode, you can select the shutter speed precisely with about 600 steps in the range of 1/25 to 1/9000 sec.

The ECS mode is suitable for shooting monitor screens or movies. You can obtain clear pictures in which horizontal streaks can hardly be seen.

Flexible audio facility

The BVP-370P is provided with two microphone channels, an intercom channel for producer line, an intercom channel for engineer line, and one program audio channel. Selection between the two intercom channels can be performed with the switch on the rear panel.

1) Clear Scan is a trademark of Sony corporation.

Self-diagnosis

Should a problem occur in the BVP-370P, its self-diagnostic capability can be used to detect and locate the problem, thus facilitating troubleshooting actions.

In-screen display capability

Carnera status and warning messages can be displayed in the viewfinder screen using characters generated by a built-in character generator. Various shooting guide markers (box cursor, center marker, safety zone marker, and zoom position marker) can also be displayed in the screen.

Combinable with high performance 7-inch viewfinder

The BVP-370P can be used in combination with either the BVF-70ACE 7-inch monochrome, or BVF-7000AQM 7-inch color, viewfinder (not supplied). When mounted on the camera head, the high performance viewfinder can easily be turned through 40° both upward and downward, and through 90° both to the right and left. It is also possible to fix the viewfinder at the desired position.

Mounting and demounting the viewfinder can easily be performed without necessity of any special tool.

Reliable transmission of various signals via a single triaxial cable

The BVP-370P transmits wide-band component video signals (Y, R-Y, B-Y) to the CCU-370P via a triaxial cable. Audio, return video and control signals can also be transmitted between the two units via this cable. In addition, power can be supplied to the camera head via the same cable.

Compact, lightweight, and power-saving design

The BVP-370P meets the basic requirements that video cameras for outside broadcast are required to satisfy: small size, light weight, and low power consumption.

Heat dissipating construction

Ventilation and other heat dissipating measures have been designed into the mechanical construction of the BVP-370P.

Others

As a CCD camera, the BVP-370P has the following advantages over cameras with a tube-type pickup device:

- · Almost no problems of lag (after-image), image burn, geometric distortion of image
- High resistance to vibration or mechanical shock
- · Capability of operating stably even in strong magnetic fields
- · No necessity for registration adjustment

1-1-2. File System

The BVP-370P can memorize adjustment data in the form of three types of files described below.

1. Reference file

This is a file to store the reference values for auto setup adjustments.

2. Setup files

These are files to store the setup data automatically or manually adjusted to different shooting conditions before actual shooting. The setup data stored in any of these files can be recalled at any time to automatically set up the camera system for a similar shooting condition to that for which the file was created and stored.

Scene files

Painting data prepared for a particular scene can be stored in a scene file. For example, the data adjusted to a particular scene during rehearsal can be stored in a scene file, which can be recalled to automatically adjust the camera system within a short time. Then you can immediately start shooting that particular scene.

About file operation

Creation, storing and recalling of files can be performed using the MSU-350 master setup unit (optional) or the RCP-3720/3721/3730/3731 series remote control panel (optional). The types and numbers of files which can be handled differ with the unit or panel used. For details, see the operation and maintenance manual for the master setup unit or remote control panel.

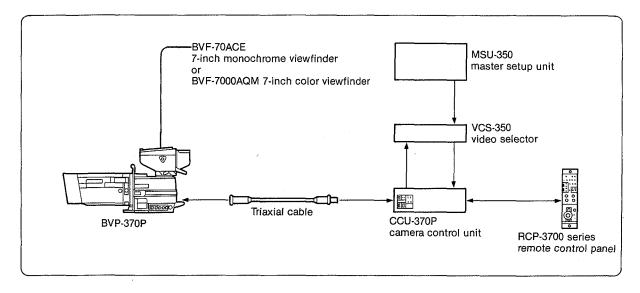
1-2. Camera System Configurations

1-2-1. Basic Configuration

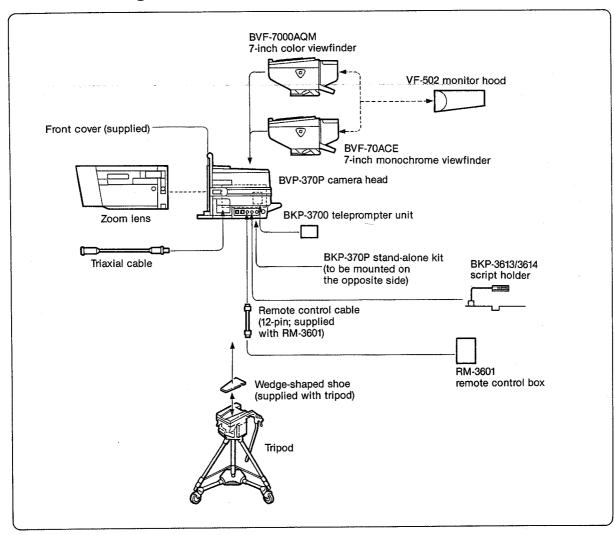
Interconnection of the BVP-370P and the CCU-370P camera control unit is to be made using a triaxial cable. The maximum allowable cable length depends on the cable as follows:

Name of cable	Diameter	Max. allowable length
Fujikura 9.6/2.22 EFTXF	14.5 mm	3000 m (2400 m*)
Belden 9232	13.2 mm	2250 m (1800 m*)
Fujikura 4.8/1.0 EFTXF	8.5 mm	1500 m (1200 m*)

^{*} For return video.



1-2-2. Configuration with Optional Accessories

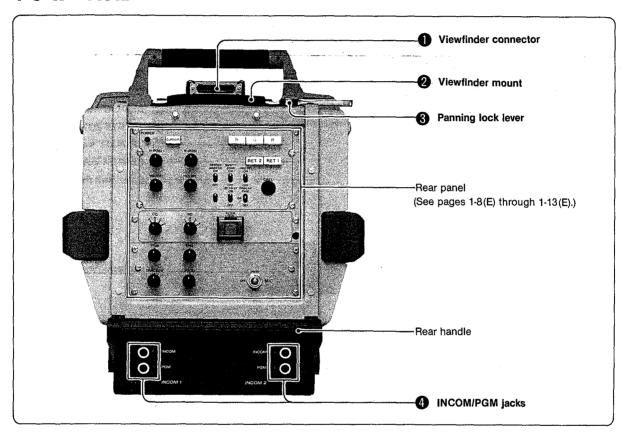


Remarks:

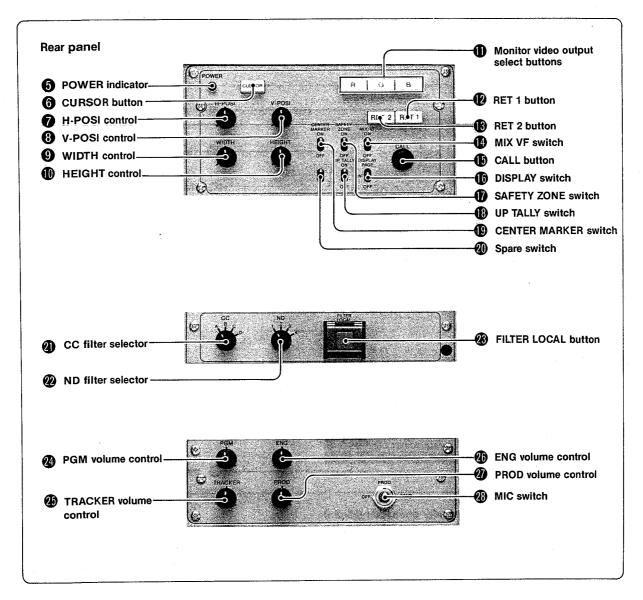
- The BVF-70ACE and BVF-7000AQM are supplied with a standard hood.
- The VF-502 is for use with BVF-70ACE/7000AQM viewfinder in outdoor shooting.
- The BKP-3700 is required on both the camera head and the CCU when a teleprompter system is to be used with the camera system.
- The BKP-3613 is for loose-type scripts, and the BKP-3614 for bound scripts. Both are supplied with a script light.
- The BKP-370P is equipped with AC power input and output connectors, a VTR. connector, and an encoder circuit board required for stand-alone use of the camera.

1-3. Locations and Functions of Parts and Controls

1-3-1. Rear



- Viewfinder connector (25-pin)
 This connector interfaces the camera head with the viewfinder.
- Viewfinder mount Attach the viewfinder to this mount. On how to attach, see "1-4-3. Attaching the viewfinder."
- Panning lock lever
 When this lever is positioned toward the rear side of the camera, the viewfinder's panning base can be turned in the friction mode. The center position of the lever frees the panning base. When positioned toward the front side of the camera, the lever locks the panning base.
- 4 INCOM/PGM (intercom/program audio) jacks (double jack)
 Connect the headset to these jacks. The upper jack is for intercom and the lower jack is for program audio.



6 POWER indicator

This indicator lights when the camera is turned on.

6 CURSOR button

When this button is depressed, the box cursor appears in the viewfinder screen. When pressed again, the cursor disappears. For more details, see "1-6. Viewfinder Screen Indications."

H-POSI (horizontal position) control

Used to adjust the horizontal position of the box cursor in the viewfinder screen.

V-POSI (vertical position) control

Used to adjust the vertical position of the box cursor in the viewfinder screen.

WIDTH control

Used to adjust the width of the box cursor in the viewfinder screen within the safety zone (see the description of 10).

10 HEIGHT control

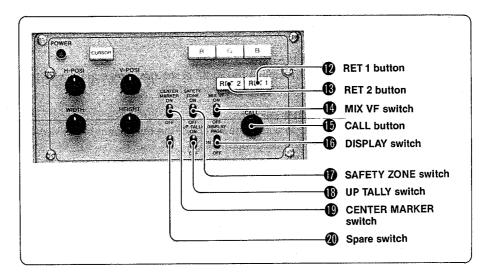
Used to adjust the height of the box cursor in the viewfinder within the safety zone (see the description of 19).

Monitor video output select buttons

Used to select video signals to be output to the viewfinder. When the EXT VF OUT/RET OUT switch on the MS board inside the camera is set to EXT VF OUT, these buttons can be used to select video signals to be output to the external monitor connected to the OUTPUT MONITOR .

These buttons work whether depressed individually or in varied combinations.

- When the R, G, and B buttons are all depressed, the Y (luminance) signal is output to the viewfinder (and to the external monitor if the above switch is set to EXT VF OUT).
- When none of the buttons are depressed, the Y signal is output to the monochrome viewfinder (or to the monochrome monitor if the above switch is set to EXT VF OUT), or the G signal is output to the color viewfinder.



RET 1 (return video 1) button

When this button is depressed, the return video 1 signal can be monitored on the viewfinder screen. When the EXT VF OUT/RET OUT switch is set to EXT VF OUT, the output signal to the MONITOR OUT connector signal is switched to the return video 1 signal.

When the button is pressed again, the camera signal is again output to the viewfinder (or to the external monitor if the above switch is set to EXT VF OUT).

When the EXT VF OUT/RET OUT switch is set to RET OUT, the return video 1 signal is always output to the MONITOR OUT connector regardless of the states of the monitor video output select buttons and this RET 1 button. (It is only when the RET 2 button ® is depressed that the return video 2 signal is output.)

RET 2 (return video 2) button

If this button is depressed when another return video system (the return video 2) is in operation besides the return video 1 system, the return video 2 signal can be monitored on the viewfinder screen. When the EXT VF OUT/RET OUT switch is set to EXT VF OUT, the output signal to the MONITOR OUT connector signal is switched to the return video 2 signal.

When the button is pressed again, the camera signal is again output to the viewfinder (or to the external monitor if the above switch is set to EXT VF OUT).

 If both RET 1 and RET 2 buttons are depressed, the return video 1 signal is output (regardless of the setting of the EXT VF OUT/RET OUT switch.)

MIX VF (mixed return video) switch

When the RET 1 button ② or RET 2 button ③ is depressed with this MIX VF button being set to ON, the camera output signal mixed with the return video 1 or 2 signal can be monitored on the viewfinder screen.

The mixing ratio of the two signals can be set using the potentiometer inside the CCU-370P. (For details, see Section 2 and after of the operation and maintenance manual for the CCU-370P.)

When the RET 1 or RET 2 button is depressed with this MIX VF switch being set to OFF, the return video 1 or 2 alone can be monitored on the viewfinder screen.

(B) CALL button

Press this button when you want to call the operator of the CCU, RCP (remote control panel), or MSU (master setup unit). When it is pressed, the red tally lamps on the CCU, RCP and MSU light up.

DISPLAY switch

Use this switch when you want to see, in the viewfinder screen, status indications about settings of switches/selectors, or items and results of automatic adjustments.

PAGE: Every time the switch is pushed up to this position, the current status

indication page is replaced with next page.

The position to enable the status indication display function. OFF: The position to disable the status indication display function.

T SAFETY ZONE switch

When this switch is set to ON, a frame showing 90% of the picture being shot (the safety zone mark) is displayed in the viewfinder screen. When the switch is set to OFF, the frame disappears. For more details, see "1-6. Viewfinder Screen Indications." The safety zone area percentage can be increased to 80% using an internal switch. (For details, see Section 2 and after.)

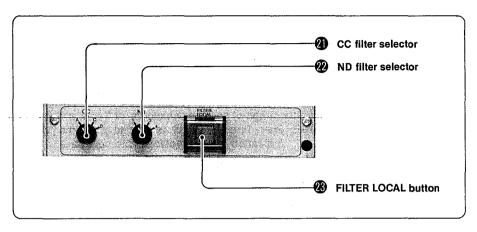
(B) UP TALLY switch

The tally lamps except for the red tally lamp on the viewfinder (i.e., the external, side, and front tally lamps) can be made operative or inoperative using this switch.

CENTER MARKER switch

When this switch is set to ON, a white cross is displayed at the center of the viewfinder screen. When the switch is set to OFF, the white cross disappears. For more details, see "1-6. Viewfinder Screen Indications."

Spare switch Not used.



CC (color temperature conversion) filter selector When the FILTER LOCAL button is lit, this selector can be used to select an appropriate filter for the lighting condition.

Selector position

A Cross filter
B 3200 K
C 4300 K
D 6300 K

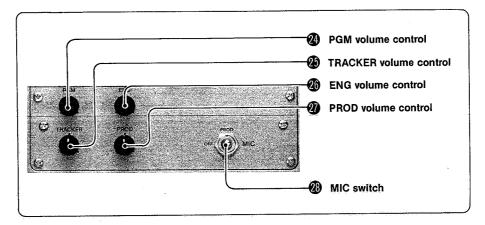
MD filter selector

When the FILTER LOCAL button $\ensuremath{\mathfrak{B}}$ is lit, this selector can be used to select an appropriate ND filter.

Selector position	Selection of filter
1	Clear
2	1/4 ND
3	1/8 ND
4	1/16 ND

ℬ FILTER LOCAL button

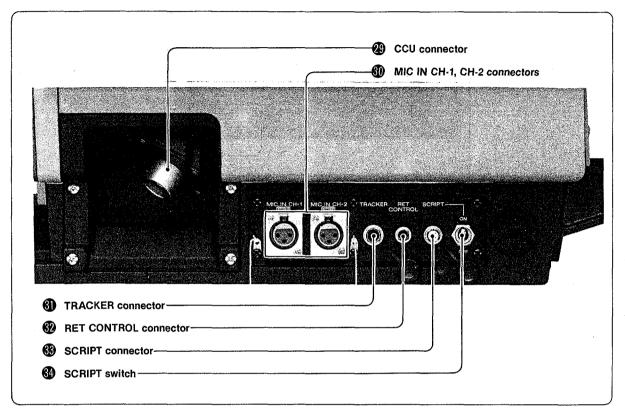
When the cover is opened and this button is depressed to light up, it is become possible to select an appropriate CC filter or ND filter using the CC or ND filter selector. When the button is pressed again to go out, filter control function is passed to the MSU/CCU.



- PGM (program audio) volume control
 Used to adjust the program audio output level.
- TRACKER volume control
 Used to adjust the output level of the audio from the TRACKER connector (1).
- ENG (engineer line) volume control
 Used to adjust the output level of the engineer line intercom.
- PROD (producer line) volume control Used to adjust the output level of the producer line intercom.
- MIC (intercom microphone) switch
 PROD: The headset microphone is connected to the producer line.

ENG: The headset microphone is connected to the engineer line.OFF: The headset microphone is disconnected from the intercom system.

1-3-2. Side Connector Panels



CCU (camera control unit) connector

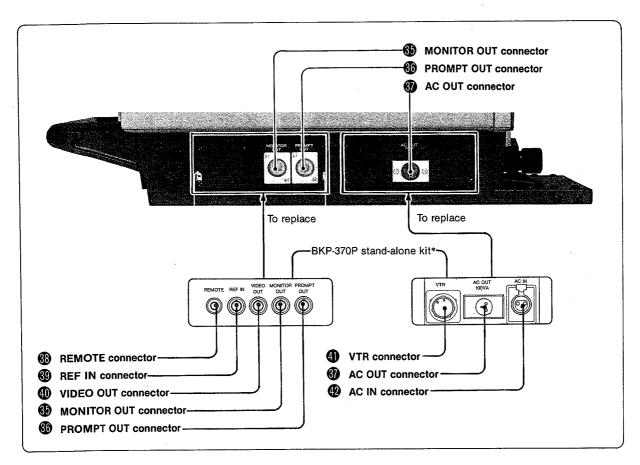
Connect to the CAMERA connector of the CCU-370P using a triaxial cable. All signals of the BVP-370P system such as video, audio, and control signals can be carried along the single cable between the camera and the CCU. Also, power is supplied to the camera via the same cable.

- MIC IN CH-1, CH-2 (microphone input channel 1, channel 2) connectors
 The outputs of two microphone channels can be connected to these connectors.
- TRACKER connector (10-pin)
 The cameraman can intercommunicate with the tracker via this connector. Also, the red tally signal, producer/engineer line intercom signal, and program audio can be output from this connector.
- RET CONTROL (return video control) connector (6-pin)

 Connect an external unit for remotely switching the return videos 1 and 2, or remotely turning on/off the intercom microphone.

- SCRIPT (script light) connector (4-pin)

 Power for script light (max. 5 W) can be supplied via this connector.
- SCRIPT (script light) switch
 Used to turn on/off the power for the script light connected to the SCRIPT connector .



MONITOR OUT (output) connector (BNC type)

When the EXT VF OUT/RET OUT switch on the MS board inside the camera is set to EXT VF OUT, a signal selected with the monitor video output select buttons (1) on the rear panel is output from this connector.

When the above switch is set to RET OUT, a return video signal is output from the connector. (Normally the return video 1 signal is output. But when the RET 2 button ® on the rear panel is depressed, the return video 2 signal is output from this connector.)

PROMPT OUT (prompter output) connector (BNC type)

When the camera and the CCLI are equipped with the BKP-3700 teler

When the camera and the CCU are equipped with the BKP-3700 teleprompter unit, the signal for prompter monitor is output from this connector.

- AC OUT (ac power output) connector (3-pin)

 AC power (220 V) for external equipment is available via this connector. 100 V, 120 V, or 240 V ac is also available if the socket inside the camera is replaced with an appropriate one. For details, see Section 2 and after.
- REMOTE (remote control box) connector

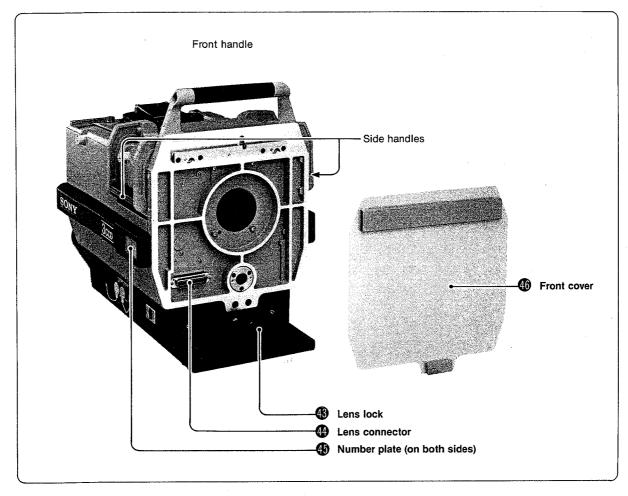
 Connect the RM-3601 remote control box for control of the camera in stand-alone use.

^{*} Replacing the left side connector panels with the BKP-370P stand-alone kit (optional) enables the BVP-370P to be used without connecting to the CCU. (For details on stand-alone operation, see page 1-41(E) as well as Section 2 and after.)

- REF IN (reference signal input) connector (BNC type)

 To lock the stand-alone operation of the camera to an external reference sync signal (VBS or BB), input the signal to this connector.
- VIDEO OUT connector (BNC type)
 In stand-alone operation of the camera, an encoded video signal is output from this connector.
- **(1)** VTR connector (26-pin)
 Connect a VTR using the CCZ-Q cable.
- AC IN (ac power input) connector For stand-alone use of the camera, connect to an ac outlet (220 to 240 V).

1-3-3. Front



4 Lens lock

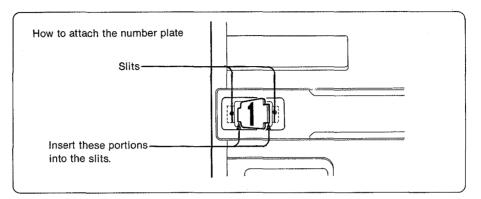
Used to lock the lens unit after hooked on the projection on the upper front of the camera.

Lens connector (36-pin)

This connector is the interface with the lens unit for lens control signals. Power can be supplied to the lens unit via this connector. (For models of lens units usable with the BVP-370P, consult your Sony representative or lens manufacturers.)

Number plate (supplied)

Attach an appropriate one of the number plates supplied.



front cover (supplied)

The camera was shipped attached with this cover. On how to remove this cover, see "1-4-2. Attaching the Lens Unit."

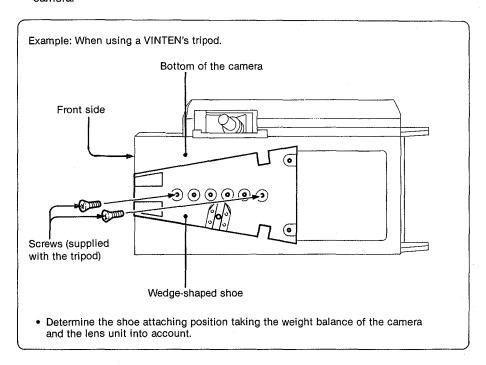
ţ (

1-4. System Setup

1-4-1. Mounting the Camera on the Tripod

Proceed as follows:

- 1 Lay the camera on its lateral side on a table, desk, or the like.
- 2 Attach the wedge-shaped shoe (supplied with the tripod) to the bottom of the

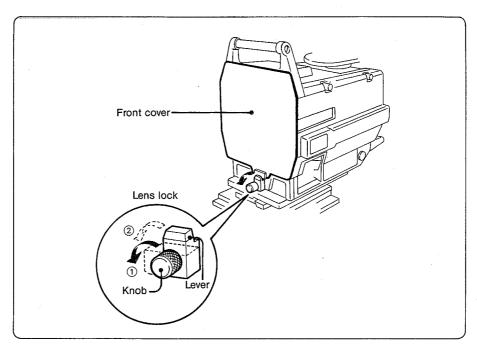


3 Attach the camera to the camera mount of the tripod.

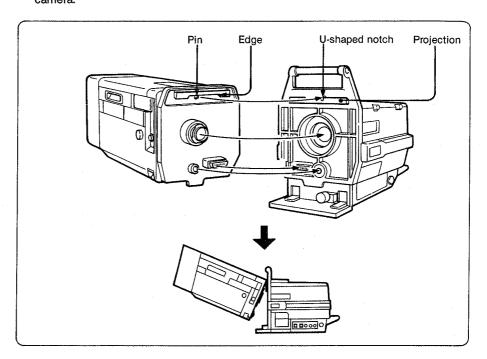
1-4-2. Attaching the Lens Unit

Proceed as follows:

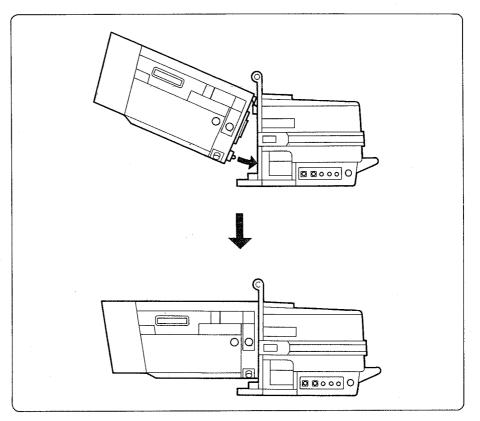
1 Loosen the knob of the lens lock at the lower front of the camera (①), and turn the lever as illustrated (②), then remove the front cover.



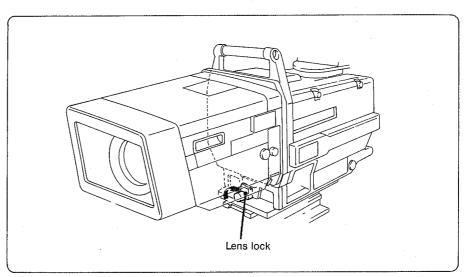
2 Aligning the pin on the lens unit with the U-shaped notch in the projection on the upper front of the camera, hook the edge of the lens unit on the projection of the camera.



3 Couple the lens unit to the camera.

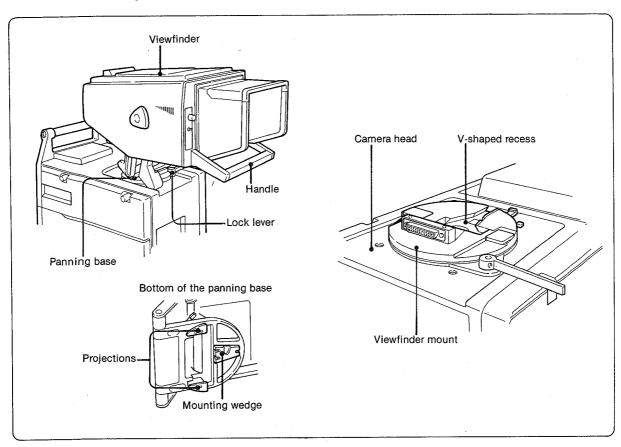


4 Turn the lever of the lens lock as illustrated, then turn the knob clockwise.



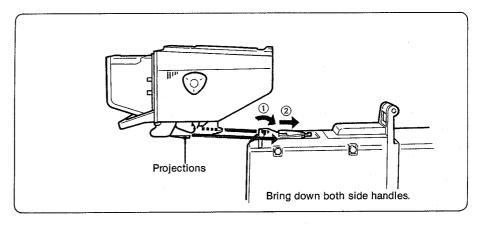
1-4-3. Attaching the Viewfinder

Parts used for attaching the viewfinder to the camera

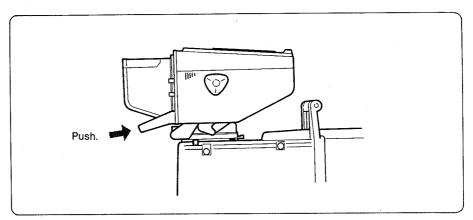


How to attach

1 Put the viewfinder on the viewfinder mount of the camera in such position that when you move it forward, the mounting wedge on the bottom of the viewfinder's panning base will enter the V-shaped recess in the viewfinder mount and the projections on the panning base bottom will come into the positions as illustrated.

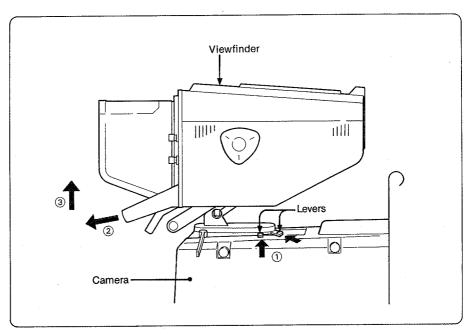


2 Push the viewfinder forward by the handle so that the panning base is securely held by the viewfinder mount of the camera.



How to detach

Push the two levers simultaneously as shown by the arrows (1), then pull the handle toward you (2), and then lift up the viewfinder.

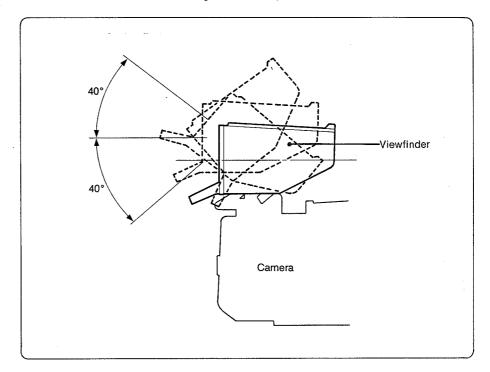


1-5. Adjusting the Angle of the Viewfinder

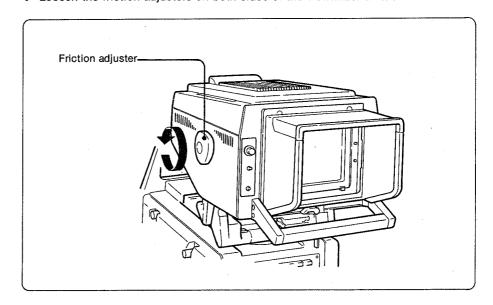
You can adjust the angle of the viewfinder so that you can see its screen comfortably.

Tilting the viewfinder

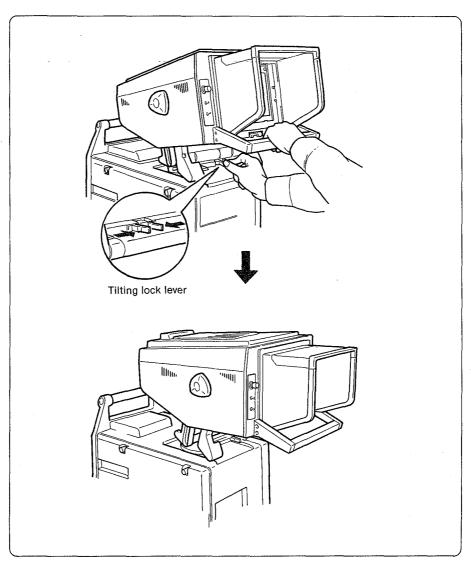
The viewfinder can be turned through 40° both upward and downward.



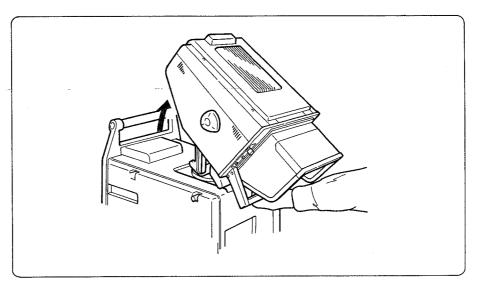
1 Loosen the friction adjusters on both sides of the viewfinder a little.



2 While pressing the prongs of the tilting lock lever of the viewfinder one against the other, pull up the viewfinder to the top position. The viewfinder locks in that position when you release the tilting lock lever.



3 Adjust the viewfinder to a comfortable angle for you.



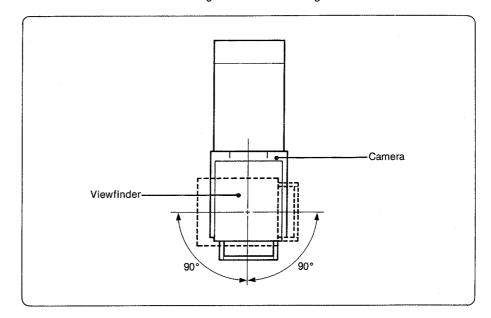
4 Tighten the friction adjusters.

Note

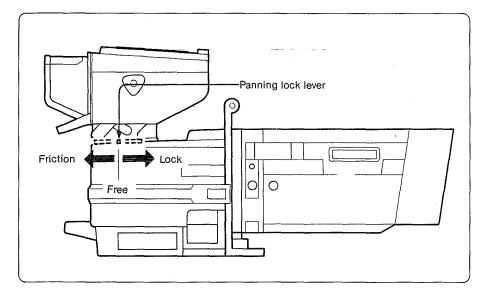
When moving the camera from a place to another, tighten the friction adjusters after lowering the viewfinder to its standard position while pressing the prongs of the tilting lock lever one against the other.

Panning the viewfinder

The viewfinder can be turned through 90° both to the right and left.



When the panning lock lever is positioned toward the rear side of the camera, the viewfinder's panning base can be turned in the friction mode. The center position of the lever frees the panning base. When positioned toward the front side of the camera, the lever locks the panning base.



Friction

When the panning lock lever is set to this position, the viewfinder neither turns to the right nor to the left easily, even when you move the camera while shooting. However, you can turn the viewfinder through up to 90° both to the right and left by using a little more force than when the panning lock lever is set to the free position.

Free

You can turn the viewfinder through up to 90° both to the right and left very easily.

Lock

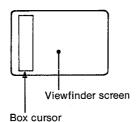
The viewfinder is fixed in the position where it is, although it may still move slightly.

1-6. Viewfinder Screen Indications

1-6-1. Marker Indications

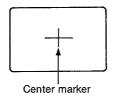
You can get a box cursor, a center, a safety zone, and a zoom position marker in the viewfinder screen by using the appropriate switches.

Box cursor



The box cursor appears in the viewfinder screen when the CURSOR button is depressed. When the button is pressed again, the cursor disappears.

Center marker



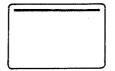
A white cross indicating the center of the screen appears when the CENTER MARKER switch is set to ON. It disappears when the switch is set to OFF. For more details, see Section 2 and after.

Safety zone marker



A frame showing 90% of the picture being shot (safety zone marker) is displayed when the SAFETY ZONE switch is set ON. It disappears when the switch is set to OFF. The safety zone area percentage can be increased to 80% using an internal switch. (For details, see Section 2 and after.)

Zoom position marker



The zoom position marker can be displayed using an internal switch. For details, see Section 2 and after.

1-6-2. Character Indications

The BVP-370P is capable to display character indications in the viewfinder screen. The character indications are grouped into status indications and warning indications.

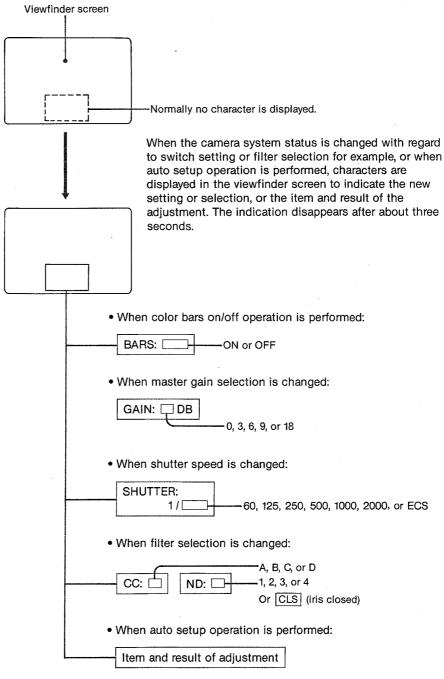
Status indications

By status indications you can check and confirm settings of switches/selectors, items and results of auto setup adjustments, and statuses of internal circuit boards. There are five pages of status indication, and change of pages can be performed using the DISPLAY switch on the rear panel. When the DISPLAY switch is set to ON, the camera is made ready to display a status indication on page 1, where normally nothing is indicated. However, when the setting of a switch or selector is changed, or when an auto setup operation is performed, the new setting or the item and result of the auto setup adjustment are displayed in characters on page 1. Once the switch is set to ON, you can change pages by pushing up the switch to the PAGE position. Each time you push, change of pages takes place in the following order:

$$Page) 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 1$$

The details of the individual pages are as follows:

Status indication page 1

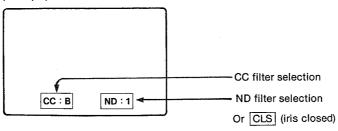


(See "1-6-3. Character Indications for Auto Setup.")

Status indication page 2

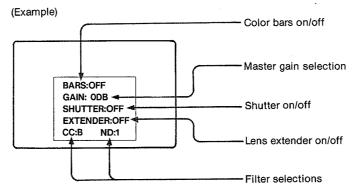
The current selections of ND and CC filters are indicated.

(Example)



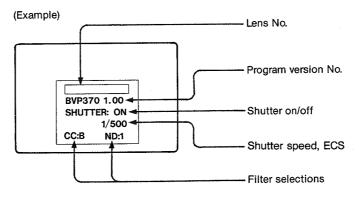
Status indication page 3

The current status is indicated with respect to color bars on/off, master gain value, shutter on/off, lens extender on/off, and filter selections.



Status indication page 4

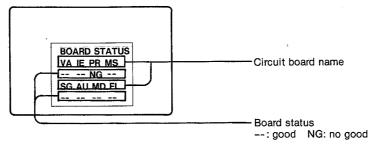
Lens No., program version No., state of shutter, shutter speed, and filter selections are indicated.



Status indication page 5

The statuses of internal circuit boards determined by self-diagnosis of the camera are indicated.

(Example)



Warning indications

When a problem occurs with the line for data communications between the camera and CCU, a warning message or the result of self-diagnosis is indicated regardless of the setting of the DISPLAY switch.

NO CCU DATA

This message appears blinking when transfer of serial data from the CCU to the camera has stopped.

FRAMING ERR

PARITY ERR

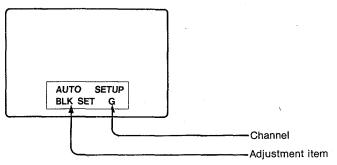
One or the other message appears blinking when an error has been detected in the serial data sent from the CCU.

1-6-3. Character Indications for Auto Setup

Indications during auto setup adjustment

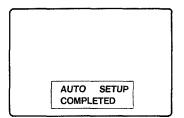
When an auto setup operation is performed with the camera being ready to display the status indication page 1, characters are displayed to indicate the adjustment item, the channel for which adjustment is being made, etc.

(Example)



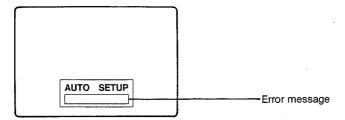
Indication for completion of adjustment

When the auto setup adjustment is completed, the following indication is displayed:



If an error is detected during an auto setup adjustment, an indication as shown below is displayed.

(Example)

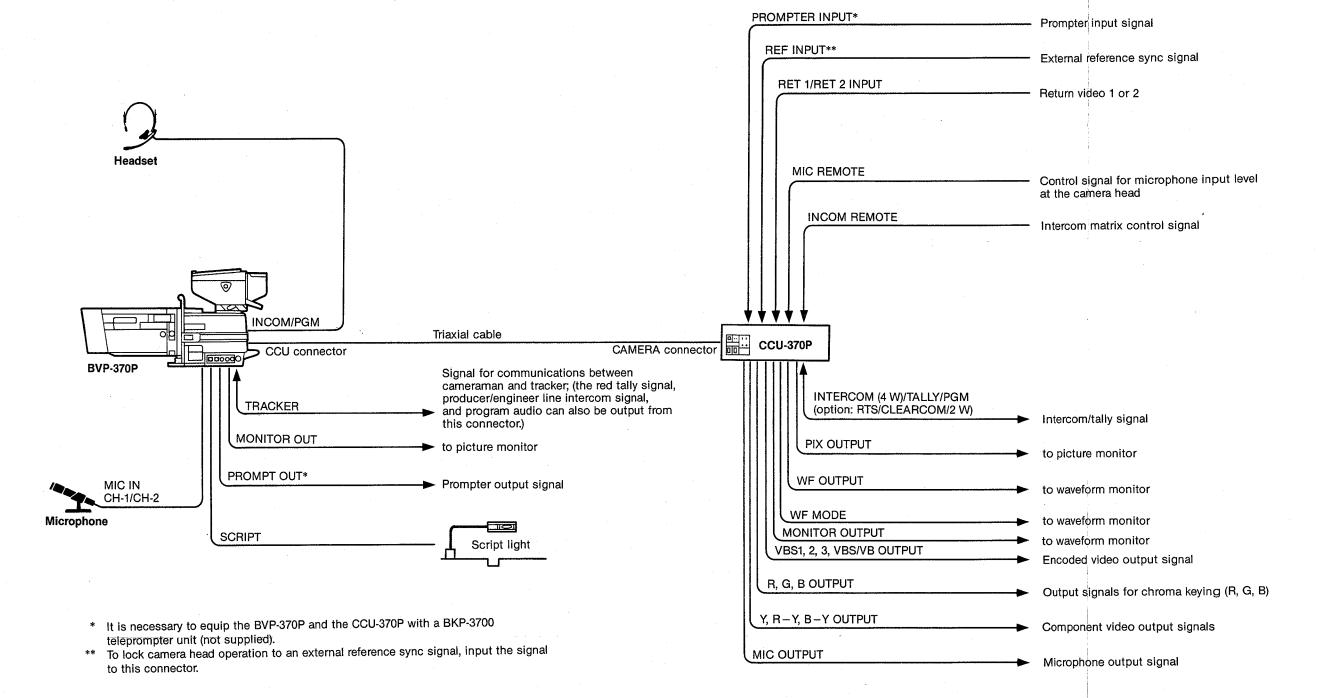


• The adjustment error messages that the BVP-370P can display are the following three:

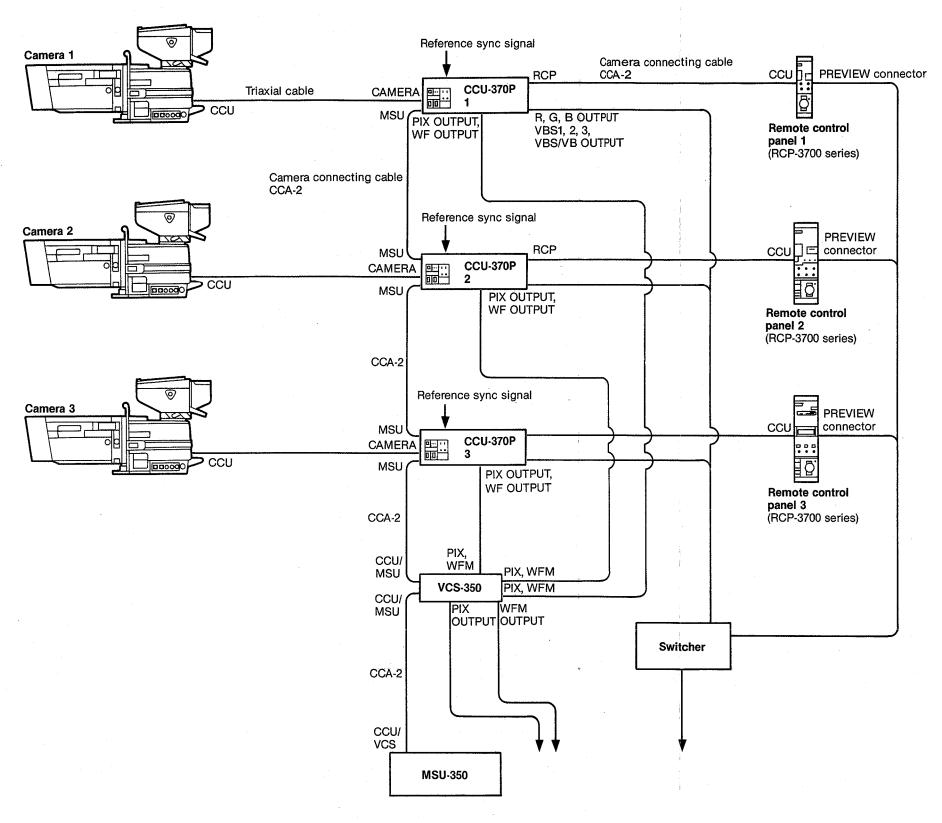
Error message	Meaning
-OVER FLOW-	The difference between the current value and the reference value is so great that the automatically adjustable range is exceeded.
-TIME LIMIT-	Adjustment was not completed within the time limit.
-LOW LEVEL-	The video output level was too low for the adjustment to be performed successfully. Increase the illumination or set the master gain to a higher value.

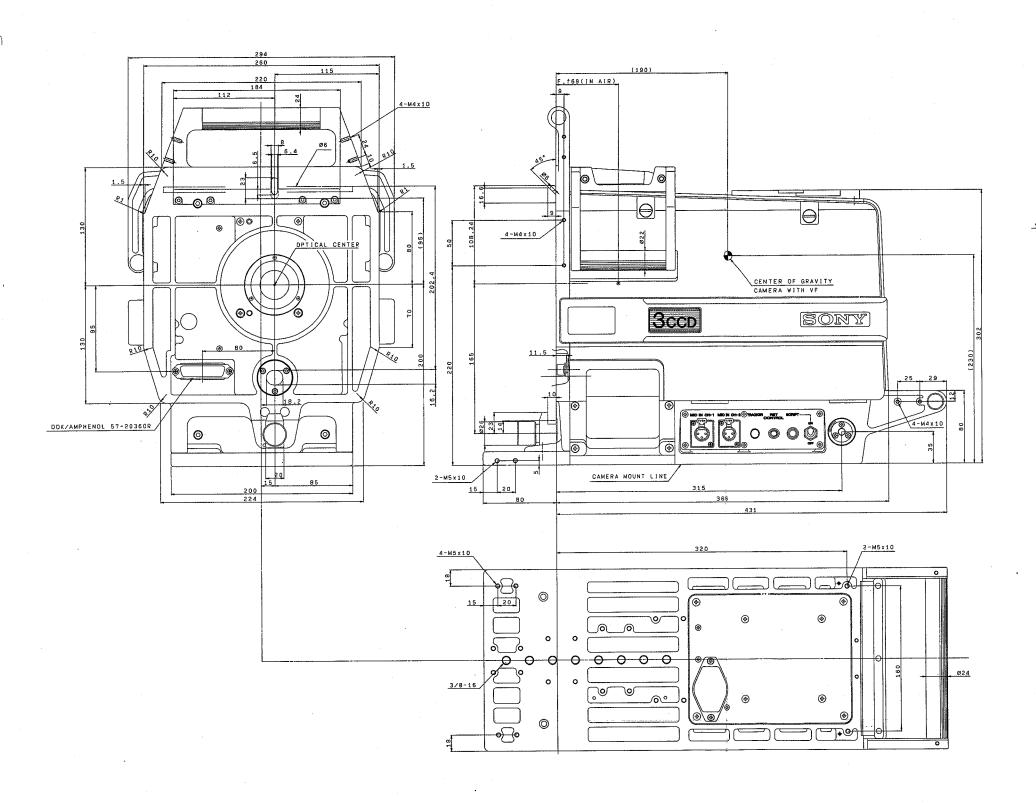
1-7. System Connections

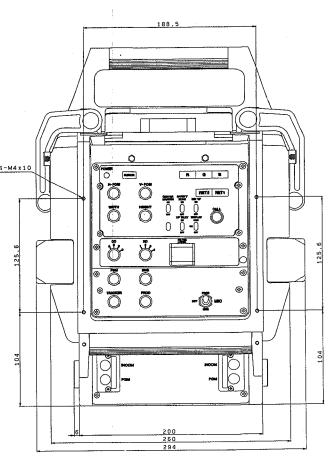
1-7-1. Connections for Single Camera Operation in Combination with the CCU-370P



1-7-2. Connections for Multiple Camera Operation

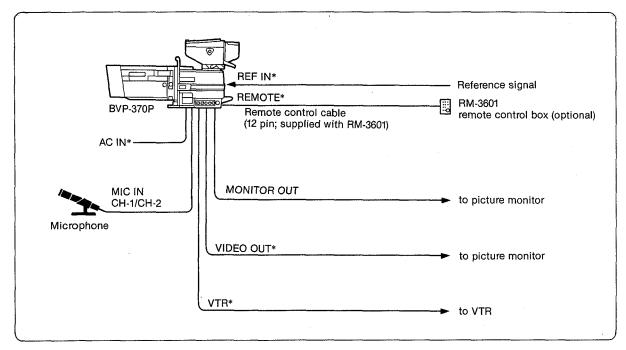






1-7-3. Connections for Stand-alone Camera Operation

For stand-alone use of the BVP-370P, the BKP-370P stand-alone kit is required. It is possible to control the BVP-370P by the RM-3601 remote control box if the inside of the camera is modified. For details, consult your authorized Sony representative.



* Connector provided in the BKP-370P stand-alone kit.

Specifications

General

Imager Image configuration Picture elements Spectral system **Built-in filters**

Sensitivity

Video S/N

Weight

Registration

Minimum illumination

Horizontal resolution

Geometric distortion

Operating temperature

2/3-inch Frame Interline Transfer CCD

RGB 3-CCDs $752(h) \times 582(v)$ F1.4 prism system Color conversion filters

A: Cross filter

B: 3200 K

C: 4300 K

D: 6300 K

ND filters

Clear 1:

1/4 ND 2:

3: 1/8 ND

1/16 ND 4:

2000 lux (F8 typical)

89.9% reflection

Approx. 7.5 lux (F1.4 lens, +18 dB gain)

60 dB (typical)

700 TV lines (at center)

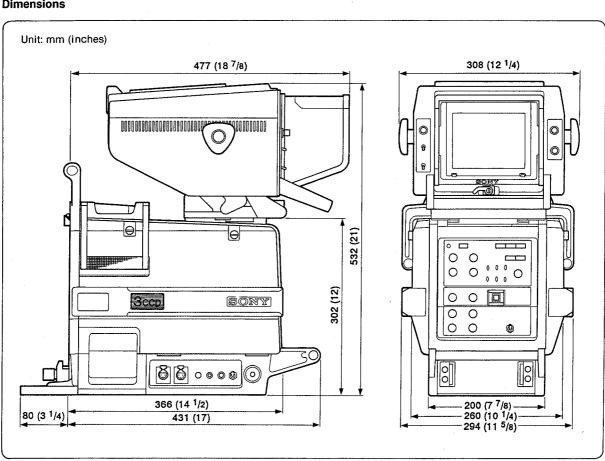
0.05% or less on entire screen (without lens)

Not identified.

-20°C to +45°C (-4°F to +113°F)

Approx. 20 kg (44 lb 1 oz) (without viewfinder)

Dimensions



Input and output connectors

CCII

Lens connector Viewfinder connector

MONITOR OUT

PROMPT OUT*

REF IN*

VIDEO OUT**

VIDEO CO.

VTR**
AC OUT
AC IN**
TRACKER
RET CONTROL

SCRIPT

INCOM/PGM

MIC IN CH-1, CH-2

Fischer type triaxial connector (1)

36-pin (1) 25-pin (1)

BNC type (1)

1.0 Vp-p, 75 ohms

BNC type (1)

1.0 Vp-p, 75 ohms

BNC type (1)

1.0 Vp-p, 75 ohms

BNC type (1)

Composite, 1.0 Vp-p

26-pin 3-pin 3-pin 10-pin (1) 6-pin (1) 4-pin (1)

Max. 5 W, dc 12 V

double jack (2)

XLR 3-pin (1, respectively)

 $-60\,\mathrm{dB}$

^{*} The BKP-3700 teleprompter unit is required.

^{**} Available with the BKP-370P stand-alone kit (optional)

Accessories supplied

Extension board A (1)
Plug for TRACKER connector (10-pin) (1)
Plug for RET CONTROL connector (6-pin) (1)
Plug for SCRIPT connector (4-pin) (1)
Lamp for red tally (2)
Fuse (6.3A) (1)
Fuse (4 A) (3)
Fuse (630mA) (1)
Metal fittings for attachment (2)
Front cover (1)
Number plate (2 sets)
Operation and maintenance manual (1)

Accessories not supplied

BKP-3700 teleprompter unit
BKP-3701 contrast control unit
BVF-77CE 7-inch monochrome viewfinder
BVF-7700P 7-inch color viewfinder
VFH-770 monitor hood (for outdoor use with BVF-77CE/7700P)
BKP-3613/3614 script holder (with a script light)
BKP-370P stand-alone kit

Recommended equipment

CCU-370P camera control unit RCP-3710/3711/3720/3721/3730/3731 remote control unit MSU-350 master setup unit VCS-350 video selector RM-3601 remote control box

Design and specifications are subject to change without notice.

Abschnitt 1. BETRIEB

1-1. Allgemeines

Die BVP-370P ist eine der leistungsstärksten Farb-Videokameras mit drei CCD-Sensorchips auf dem Markt und eignet sich hervorragend sowohl für den Einsatz im Studio als auch für nicht studiogebundene, mobile Fernsehaufnahmen (OB-Aufnahmen). Die charakteristischen Merkmale dieser Kamera sind die neuentwickelten 2/3-Zoll-FIT-CCD-Bildsensoren (Frame Interline Transfer) mit HAD-Photodioden (Hole-Accumulated Diode) und die extrem hohe Auflösung von 440 000 Bildpunkten.

Bei dieser kompakten und leichten Kamera mit geringer Leistungsaufnahme bilden die neuesten Digital- und Analogbauteile und ergonomische Gestaltung eine harmonische Einheit. Sie zeichnet sich durch verschiedene innovative Funktionen aus, u.a. präzise, von modernsten Mikrocomputern gesteuerte Setup-Operation, und ist einfach in Bedienung und Handhabung.

In der Grundkonfiguration wird die BVP-370P mit einem Triaxialkabel an die Kamera-Steuereinheit CCU-370P angeschlossen und von der Master-Setup-Einheit MSU-350 bzw. einem Fernbedienpult der Baureihe RCP-3700 aus über die CCU-370P gesteuert.* Neben diesen Komponenten sind außerdem der Video-Selector VCS-350 und eine Vielzahl weiterer Komponenten als Sonderzubehör erhältlich. Auf diese Weise läßt sich für jeden Zweck das optimale Kamerasystem zusammenstellen, von der Programmproduktion im Studio bis zu OB-Aufnahmen vor Ort. Ein weiteres herausragendes konstruktives Merkmal dieser Kamera ist ihre große Flexibilität in Bezug auf künftige Systemerweiterungen.

^{*} Soll diese Kamera ohne die Kamera-Steuereinheit CCU-370P betrieben werden (Einzelbetrieb), so sind der Einzelbetrieb-Adaptersatz BKP-370P und die Fernsteuerbox RM-3601 erforderlich (beides Sonderzubehör).

1-1-1. Besondere Merkmale

Hohe Bildauflösung

Dank der Anwendung neuentwickelter FIT-HAD-CCD-Bildsensoren ist der vertikale "Schmier-Pegel" (Smear Level) der BVP-370P extrem niedrig und ihr "Flacker-Pegel" (Flare Level) erheblich geringer als bei Kameras, die mit CCD-Sensoren herkömmlicher Bauart ausgestattet sind. "Zwei-Zeilen-Bildverstärkung" (Two-line Image Enhancement) und zahlreiche weitere Merkmale, die die Möglichkeiten einer CCD-Kamera voll ausschöpfen, sind für diese Gerät benützt.

Hoher Rauschabstand

Der hohe Rauschabstand von 60 dB (typisch) ist das gemeinsame Resultat der Anwendung eines Hochleistungs-CCD-Sensors und der umfassenden Nutzung aller Möglichkeiten, die fortgeschrittene Video-Schaltungen und Integrationstechnologien bieten.

Großer Dynamikbereich

Die automatischen/manuellen Kniepunkt- und Knieneigungs-Einstellungen ermöglichen ein natürliches und scharfes Bild bis zu 600% der normalen Lichtintensität.

Hohe Empfindlichkeit

Die Kamera zeichnet sich durch eine Empfindlichkeit von F8 bei 2000 Lux (typisch) aus. Wird die Videopegelverstärkung um 18 dB angehoben, so ist bei einer Mindestgegenstandsbeleuchtung von 7,5 Lux ein ausreichender Ausgangspegel erzielbar.

Automatische Setup- und Datenspeicher-Funktionen

Integrierte Mikrocomputer garantieren präzise und schnelle Setup-Einstellungen. Mit Hilfe der vorhandenen Speicher-Funktionen lassen sich Einstellungsdaten im Kamerakopf speichern und jederzeit zur automatischen Kameraeinstellung abrufen. Dadurch kann die Kamera innerhalb kurzer Zeit eingerichtet und die erforderliche Kamerawartungszeit reduziert werden.

Elektronischer Verschluß

Die Auslösezeit des elektronischen Verschlusses der BVP-370P läßt sich in sechs Stufen einstellen. Auf diese Weise können durch Wahl der optimalen Verschlußzeit auch Objekte in rascher Bewegung mit einem klaren Bild aufgenommen werden.

ECS-Funktion (Extended Clear Scan)

(bei BVP-370P mit Serien-Nr. 42701 und höher)

Neben der oben erwähnten Verschluß-Einstellfunktion bieten die Kameras mit ihrer ECS-Funktion eine Möglichkeit zur Feineinstellung der Verschlußzeit (in etwa 600 stufen von 1/25 bis 1/9000 s) , um Monitor-Bildschirme oder Filme störstreifenfrei aufnehmen zu können.

 Clear Scan "Clear Scan" ist ein Warenzeichen der Sony Corporation. Flexible Tonwiedergabe

Die BVP-370P ist für zwei Mikrofonkanäle, zwei Gegensprechkanäle und einen Kanal für Audio-Signalquelle ausgelegt. Die Gegensprechkanäle können durch entsprechende Betätigung der Wahlschalter an der Kamerarückseite jeweils mit der Produktions- oder Technik-Leitung verbunden werden.

Eigenprüfung

Beim Auftreten von Störungen in der BVP-370P steht eine Eigenprüffunktion zur Erfassung und Eingrenzung der jeweiligen Störung zur Verfügung, so daß die Störungssuche erleichtert wird.

Status- und Warnanzeigen auf dem Sucherschirm

Mit Hilfe des eingebauten Zeichengenerators lassen sich Status- und Warnanzeigen auf dem Bildschirm des Suchers darstellen. Verschiedene Aufnahmeanhaltsmarkierungen (Box-Cursor, Zentrier-, Sicherheitszonen- und Zoomstellungsmarkierung) können ebenfalls auf den Schirm gebracht werden.

Kombinierbar mit hochwertigem 7-Zoll-Sucher

Die BVP-370P kann zusammen mit dem 7-Zoll-Monochromsucher BVF-70ACE oder dem 7-Zoll-Farbsucher BVF-7000AQM (Sonderzubehör) verbunden werden. Der am Kamerakopf befestigte Sucher läßt sich leicht um jeweils 40° nach oben oder unten kippen bzw. um 90° nach links oder rechts schwenken. Außerdem ist es möglich, den Sucher nach Wunsch in einer Position zu fixieren.

Der Ein- und Ausbau des Suchers ist auf einfache Weise ohne Verwendung von Sonderwerkzeugen möglich.

1-1-2. Datenspeicher-System

Die BVP-370P kann die Einstellungsdaten in Form von drei Dateiarten speichern, die im folgenden beschrieben werden.

1. Referenz-Datei

In dieser Datei werden die Bezugswerte für die Auto-Setup-Einstellung untergebracht.

2. Setup-Dateien

Diese Dateien dienen zum Abspeichern von automatisch oder manuell gewählten Setup-Daten bei unterschiedlichen Aufnahmebedingungen vor dem eigentlichen Beginn der Bildaufzeichnung.

Die abgespeicherten Setup-Daten können jederzeit aus einer beliebigen Datei aufgerufen werden, um das Kamerasystem automatisch auf die gleichen Aufnahmebedingungen einzustellen wie bei der Erstellung und Abspeicherung der Datei.

3. Szenen-Datei

Daten für bestimmte "Szenenfärbungen" lassen sich in einer Szenen-Datei ablegen. So können z.B. die während der Probe an eine bestimmte Szene angepaßten Daten in einer Szenen-Datei gespeichert werden und stehen dann jederzeit zum Abruf bereit, um das Kamera-System in kurzer Zeit automatisch einzurichten. Die Aufzeichnung der jeweiligen Szene kann dann unverzüglich beginnen.

Besonderheiten beim Umgang mit Dateien

Das Erstellen, Speichern und Aufrufen von Dateien ist mit der Master-Setup-Einheit MSU-350 (Sonderzubehör) oder einem der Fernbedienpulte RCP-3720/3721/3730/3731 (Sonderzubehör) möglich.

Art und Anzahl der möglichen Dateien richten sich jeweils nach der Komponente oder dem Fernbedienpult. Einzelheiten hierzu entnehmen Sie bitte der Bedienungs- und Wartungsanleitung zu Master-Setup-Einheit bzw. Fernbedienpult.

1-2. Systemaufbau

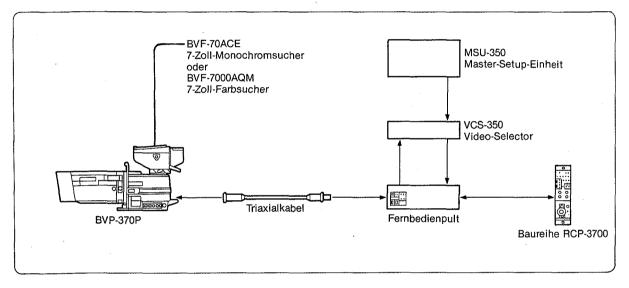
1-2-1. Grundkonfiguration

Zur Zusammenschaltung von BVP-370P und Kamera-Steuereinheit CCU-370P ist ein Triaxialkabel erforderlich.

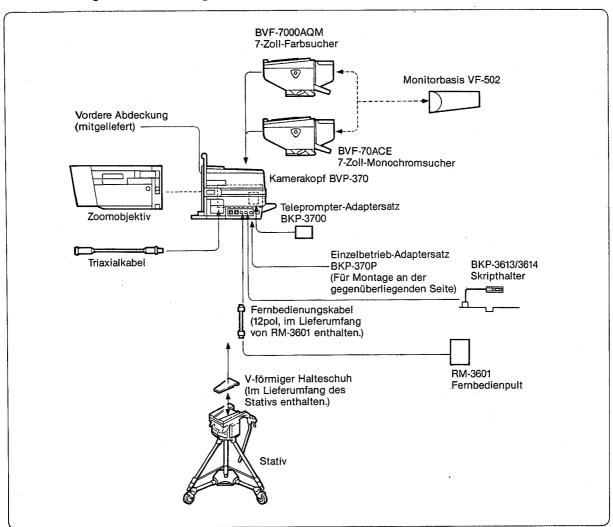
Die zulässige Höchstlänge bei der Signalübertragung über Triaxialleitungen richtet sich nach dem jeweils verwendeten Kabel (siehe folgende Tabelle):

Kabelbezeichnung	Durchmesser	Zulässige Höchstlänge
Fujikura 9.6/2.22 EXTEF.	14,5 mm	3000 m (2400 m*)
Belden 9232	13,2 mm	2250 m (1800 m*)
Fujikura 4.8/1.0 EFTXF	8,5 mm	1500 m (1200 m*)

^{*} Zur Rückführungssignalübertragung



1-2-2. Systemkonfiguration mit Sonderzubehörkomponenten

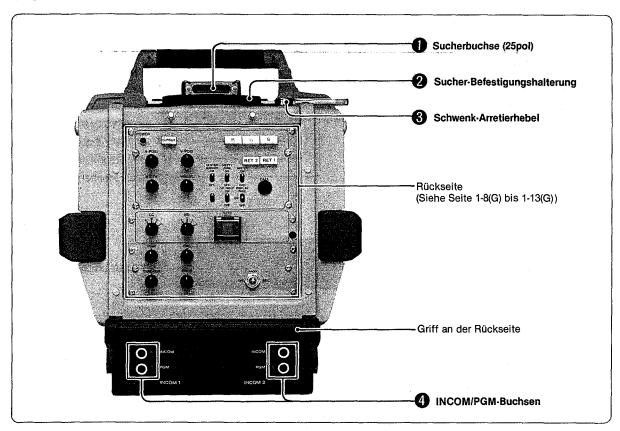


Zur Beachtung:

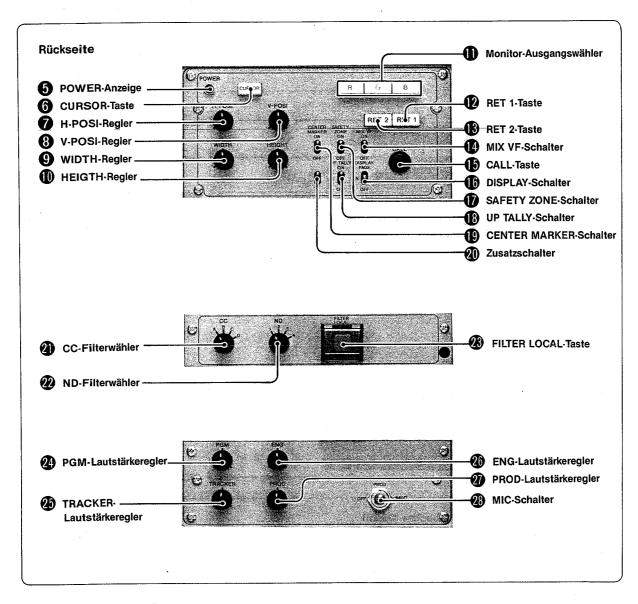
- BVF-70ACE und BVF-7000AQM mit Standard-Blendschutz
- VF-502 zur Verwendung mit Sucher BVF-70ACE/7000AQM bei Aufnahmen im Freien
- Der BKP-3700 ist bei Kamerakopf und Kamera-Steuereinheit erforderlich, wenn ein Teleprompter-System an das Kamerasystem angeschlossen ist.
- BKP-3613 ist für Loseblatt-Skripts und BKP-3614 für gebundene Skripts bestimmt.
 Beide Skripthalter verfügen über eine Leselampe.
- BKP-370P verfügt über Wechselspannungseingänge und -ausgänge, einen Videocorder-Anschluß und eine Codierschaltung, die beim Einzelbetrieb der Kamera erforderlich ist.

1-3. Lage und Funktion der Teile und Bedienelemente

1-3-1. Rückseite



- Sucherbuchse (25pol)
 Dieser Anschluß dient als Schnittstelle zur Verbindung zwischen dem Kamerakopf und dem Sucher.
- 2 Sucher-Befestigungshalterung
 Der Sucher wird an dieser Halterung angebracht. Einzelheiten zur Suchermontage
 entnehmen Sie bitte Absatz "1-4-3. Anbringen des Suchers".
- Schwenk-Arretierhebel Ist dieser Hebel zur Rückseite der Kamera geschoben, so läßt sich der Schwenkuntersatz des Suchers nur mit einem gewissen Kraftaufwand gegen einen Widerstand (schwergängig) drehen. In Mittelstellung des Hebels ist der Schwenkuntersatz frei beweglich. Steht der Hebel an der Kameravorderseite, so ist der Schwenkuntersatz in seiner Lage verriegelt.
- INCOM/PGM-Buchsen (Doppelbuchse)
 Diese Buchsen sind zum Anschluß einer Hör-Sprechgarnitur bestimmt. Die obere Buchse ist für den Gegensprechkanal und die untere für den Audio-Signalkanal bestimmt.



6 POWER-Anzeige

Diese Anzeige leuchtet bei eingeschalteter Kamera.

6 CURSOR-Taste

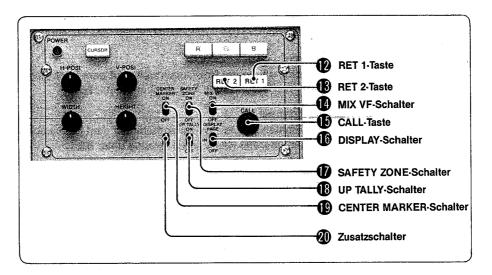
Durch Drücken dieser Taste erscheint der Box-Cursor auf dem Sucherschirm. Bei erneutem Tastendruck verschwindet der Cursor wieder. Einzelheiten hierzu entnehmen Sie bitte "1-6. Anzeigen im Sucher".

7 H-POSI-Regler

Zur Einstellung der Horizontalposition des Box-Cursors auf dem Sucherschirm.

- **8 V-POSI-Regler**Zur Einstellung der Vertikalposition des Box-Cursors auf dem Sucherschirm.
- WIDTH-Regler Zur Einstellung der Box-Cursorbreite auf dem Sucherschirm innerhalb der Sicherheitszone (siehe Beschreibung unter 10).
- HEIGTH-Regler

 Zur Einstellung der Box-Cursorhöhe auf dem Sucherschirm innerhalb der Sicherheitszone (siehe Beschreibung unter 19).
- Monitor-Ausgangswähler
 Zur Wahl der Videosignale, die auf dem Sucherschirm dargestellt werden. Ist Schalter
 EXT VF OUT/RET OUT am MS-Bedienfeld hinter der Kameraabdeckung in Stellung
 EXT VF OUT, so lassen sich mit diesen Tasten die Videosignale wählen, die dem
 externen Monitor zugeführt werden sollen, der mit Ausgang MONITOR OUT
 verbunden ist. Die Ausgangswähler wirken bei individueller oder kombinierter
 Betätigung.
 - Sind die Tasten R, G und B gleichzeitig betätigt, so wird das Leuchtdichtesignal (Y-Signal) dem Sucher zugeführt (und dem externen Monitor, falls Schalter EXT VF OUT/RET OUT auf EXT VF OUT steht).
 - Ist kein Monitor-Ausgangswähler betätigt, wird einem Monochrom-Sucher (externem Monochrom-Monitor bei Schalterstellung EXT VF OUT) das Leuchtdichtesignal und einem Farbsucher das G-Signal zugeführt.



RET 1-Taste

Wird diese Taste gedrückt, so läßt sich Rückführungsvideosignal 1 auf dem Sucherschirm überwachen. Ist Schalter EXT VF OUT/RET OUT in Stellung EXT VF OUT, so wird MONITOR OUT-Anschluß auf die Ausgabe des Rückführungsvideosignals 1 umgeschaltet.

Bei erneutem Tastendruck erscheint wieder das Kamerabild auf dem Sucherschirm (oder dem externen Monitor bei Schalterstellung EXT VF OUT).

Ist Schalter EXT VF OUT/RET OUT in Stellung RET OUT, so wird Rückführungsvideosignal 1 unabhängig von der Stellung der Monitor-Ausgangswähler und der RET 1-Taste stets über den MONITOR OUT-Anschluß ausgegeben. (Die Ausgabe von Rückführungsvideosignal 2 erfolgt nur bei Betätigung der RET 2-Taste (3).

(B) RET 2-Taste

Ist neben Rückführungsvideosystem 1 ein weiteres Rückführungsvideosystem (System 2) in Betrieb, so läßt sich Rückführungsvideosignal 2 auf dem Sucherschirm überwachen. Ist Schalter EXT VF OUT/RET OUT in Stellung EXT VF OUT, wird der MONITOR OUT-Anschluß auf die Ausgabe von Rückführungsvideosignal 2 umgeschaltet.

Bei erneutem Tastendruck erscheint das Kamerabild wieder auf dem Sucherschirm (oder dem externen Monitor bei Schalterstellung EXT VF OUT).

 Sind beide Tasten RET 1 und RET 2 betätigt, so wird (unabhänging von der Stellung des Schalters EXT VF OUT/RET OUT) Rückführungsvídeosignal 1 ausgegeben.

MIX VF-Schalter

Wird bei betätigtem MIX VF-Schalter (Stellung ON) die RET 1-Taste ② oder RET 2-Taste ③ gedrückt, so erfolgt eine Mischung von Kamera-Ausgangssignal und Rückführungsvideosignal 1 oder 2. Das resultierende Mischsignal läßt sich auf dem Sucherschirm überwachen.

Das Mischungsverhältnis der beiden Signale kann mit dem Potentiometer in der CCU-370P eingestellt werden. (Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten im Bedienungs- und Wartungshandbuch für CCU-370P.) Ist der MIX VF-Schalter auf OFF gestellt, wenn RET 1- oder RET 2-Taste gedrückt wird, so läßt sich nur Rückführungsvideosignal 1 bzw. 2 auf dem Sucherschirm darstellen.

(E) CALL-Taste

Diese Taste dient zum Rufen des Bedienpersonals für Kamera-Steuereinheit (CCU), Fernbedienpult (RCP) oder Master-Setup-Einheit (MSU). Beim Drücken der Taste leuchtet jeweils die rote Signallampe an CCU, RCP oder MSU auf.

DISPLAY-Schalter

Mit diesem Schalter können auf Wunsch die Status-Anzeigen über die Einstellung von Bedienelementen oder-Parameter und Ergebnisse von Automatikeinstellungen auf dem Sucherschirm eingeblendet werden.

PAGE: Bei jedem Tastendruck in dieser Stellung wird auf die nächstfolgende Status-

Anzeigeseite weitergeschaltet.

ON: Freigabeposition für die Status-Anzeigefunktion.OFF: Sperrposition für die Status-Anzeigefunktion.

M SAFETY ZONE-Schalter

Ist dieser Schalter auf ON gestellt, erscheint auf dem Sucherschirm ein Rahmen (als Begrenzung der Sicherheitszone), dessen Fläche 90% des Kamera-Aufnahmebilds umfaßt. In Schalterstellung OFF erfolgt keine Rahmeneinblendung. Einzelheiten hierzu entnehmen Sie bitte "1-6. Anzeigen im Sucher".

Der Anteil der Sicherheitszone läßt sich mit Hilfe des internen Schalters bis auf 80% steigern. (Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.)

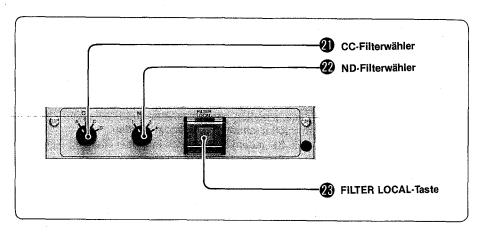
UP TALLY-Schalter

Mit diesem Schalter werden alle Signallampen (d.h. extern, seitlich und frontal) außer der roten Signallampe am Sucher aktiviert bzw. deaktiviert.

19 CENTER MARKER-Schalter

Steht dieser Schalter auf ON, so wird zur Markierung des Aufnahmebildzentrums in der Mitte des Suchers ein weißes Kreuz eingeblendet. In Schalterstellung OFF erscheint diese Markierung nicht. Einzelheiten hierzu entnehmen Sie bitte "1-6. Anzeigen im Sucher".

Zusatzschalter Nicht belegt.



2 CC-Filterwähler

Leuchtet Taste FILTER LOCAL ② auf, so läßt sich mit diesem Bedienelement das Filter wählen, das zu den gerade herrschenden Lichtverhältnissen paßt.

Position Filter (Farbtemperatur)		
Α	Kreuzfilter	
В	3200 K	
С	4300 K	
D	6300 K	

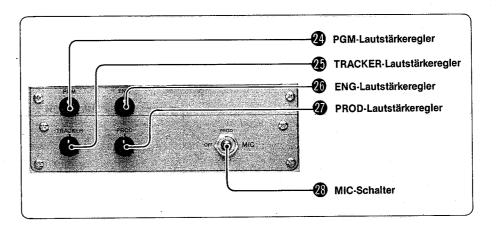
2 ND-Filterwähler

Leuchtet Taste FILTER LOCAL @ auf, so läßt sich mit diesem Bedienelement das passende ND-Filter wählen.

Position	Filter
1	Klar
2	1/4 ND
3	1/8 ND
4	1/16 ND

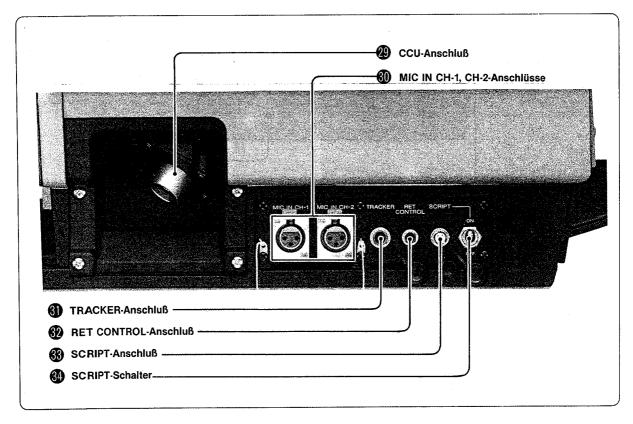
B FILTER LOCAL-Taste

Sobald die Kameraabdeckung geöffnet und diese Taste gedrückt ist und aufleuchtet, läßt sich mit Hilfe von CC-Filterwähler ② oder ND-Filterwähler ② ein passendes Farbfilter oder ND-Filter wählen. Nach erneutem Tastendruck (Ausraststellung) geht die Filter-Wahlfunktion auf MSU/CCU über.



- **PGM-Lautstärkeregler**Zur Einstellung der Lautstärke der Audio-Programmquelle.
- TRACKER-Lautstärkeregler
 Zur Einstellung des Audio-Ausgangspegels aus dem TRACKER-Anschluß 3.
- **ENG-Lautstärkeregler**Zur Einstellung des Audio-Ausgangspegels auf dem Technik-Sprechkanal.
- PROD-Lautstärkeregler
 Zur Einstellung des Audio-Ausgangspegels auf dem Produktions-Sprechkanal.
- 28 MIC-Schalter
 - PROD: Das Mikrofon der Hör-Sprechgarnitur ist mit dem Produktions-Sprechkanal verbunden.
 - **ENG:** Das Mikrofon der Hör-Sprechgarnitur ist mit dem Technik-Sprechkanal verbunden.
 - OFF: Das Mikrofon der Hör-Sprechgarnitur ist vom Gegensprechsystem getrennt.

1-3-2. Seitliche Anschluß-Felder



CCU-Anschluß

Dieser Anschluß wird über ein Triaxialkabel mit dem CAMERA-Anschluß an der CCU-370P verbunden. Alle Signale des BVP-370P-Systems (z.B. Video-, Audio- und Steuersignale) werden über dieses Kabel zwischen Kamera und Kamera-Steuereinheit übertragen. Auch die Stromversorgung der Kamera erfolgt über dieses Kabel.

- MIC IN CH-1, CH-2-Anschlüsse
 Die Ausgangssignale von zwei Mikrofonkanälen können hier abgegriffen werden.
- TRACKER-Anschluß (10pol)

 Der Kameramann kann über diesen Anschluß mit der Tracker-Einheit kommunizieren.

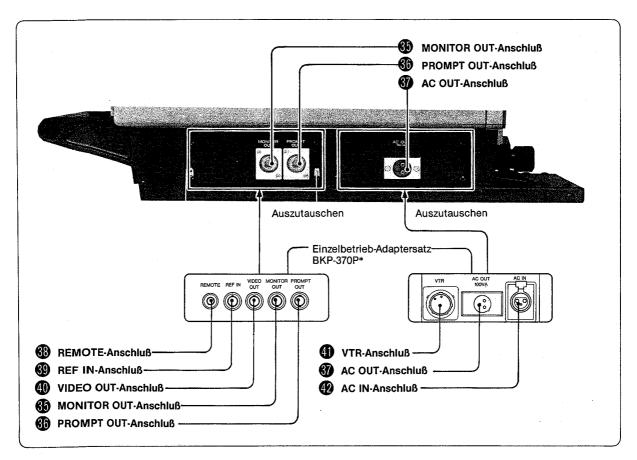
 Darüber hinaus dient dieser Anschluß auch als Ausgang für das Rotsignal, das Produktions-/Technik-Sprechkanalsignal und das Audio-Programmsignal.
- RET CONTROL-Anschluß (6pol)

 Zum Anschluß einer externen Einheit, mit der fernbedient zwischen

 Rückführungsvideosignal 1 und 2 umgeschaltet sowie das Sprechkanalmikrofon ein/ausgeschaltet werden kann.

- SCRIPT-Anschluß (4pol)
 An diesem Anschluß wird die Betriebsspannung der Leselampe (für max. 5 W) abgegriffen.
- SCRIPT-Schalter

 Zum Ein- und Ausschalten der Leselampe, die mit dem SCRIPT-Anschluß
 verbunden ist.



MONITOR OUT-Anschluß

Ist Schalter EXT VF OUT/RET OUT am MS-Bedienfeld hinter der Kameraabdeckung in Stellung EXT VF OUT, wird über diesen Anschluß das Signal ausgegeben, das mit den Monitor-Ausgangswählern an der Rückseite gewählt worden ist. In Schalterstellung RET OUT wird über diesen Anschluß ein Rückführungsvideosignal ausgegeben. (Normalerweise erfolgt die Ausgabe von Rückführungsvideosignal 1. Wird jedoch die RET 2-Taste an der Rückseite gedrückt, so dient dieser Anschluß als Ausgang für Rückführungsvideosignal 2.)

PROMPT OUT-Anschluß (BNC)

Sind sowohl Kamera als auch Kamera-Steuereinheit mit dem Prompter-Adaptersatz BKP-3700 ausgestattet, wird über diesen Anschluß das Signal für den Prompter-Monitor ausgegeben.

AC OUT-Anschluß (3pol)

Über diesen Anschluß erfolgt die Stromversorgung (220 V Wechselspannung) der angeschlossenen externen Komponenten. Durch Austausch des Steckverbinders in der Kamera gegen den jeweils passenden Typ können auch Betriebswechselspannungen von 100, 120 und 240 V abgegriffen werden. Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.

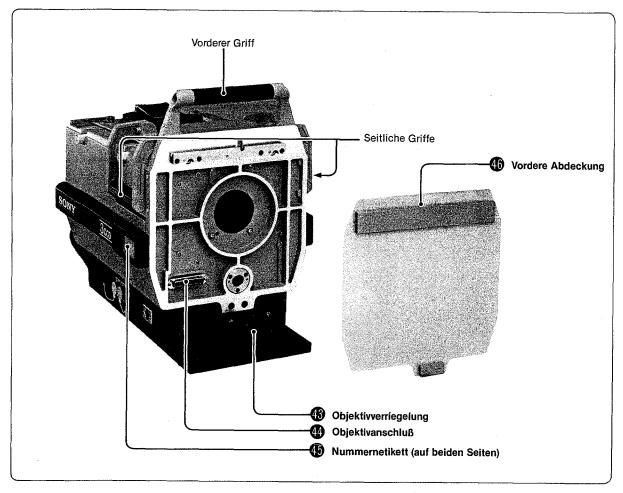
^{*} Nach dem Austausch des Anschlußfelds auf der linken Kameraseite gegen den Einzelbetrieb-Adaptersatz BKP-370P (Sonderzubehör) kann die BVP-370P ohne Anschluß an die Kamera-Steuereinheit eingesetzt werden. (Einzelheiten zum Einzelbetrieb entnehmen Sie bitte Seite 1-41 (G) sowie Teil 2 und den folgenden Abschnitten.)

- REMOTE-Anschluß

 Zum Anschluß der Fernsteuerbox RM-3601 zur Steuerung der Kamera bei Einzelbetrieb.
- REF IN-Anschluß (BNC)
 Eingang für das externe Bezugssignal (FBAS bzw. FBA), mit dem die Kamera bei Einzelbetrieb synchronisiert wird.
- VIDEO OUT-Anschluß (BNC)
 Beim Einzelbetrieb der Kamera wird über diesen Anschluß ein codiertes Videosignal ausgegeben.
- VTR-Anschluß (26pol)

 Zum Anschluß eines Videorecorders über das CCZ-Q-Verbindungskabel.
- 42 AC IN-Anschluß Zum Anschluß des Netzkabels an eine Wandsteckdose (220/240 V) bei Einzelbetrieb.

1-3-3. Vorderseite



43 Objektivverriegelung

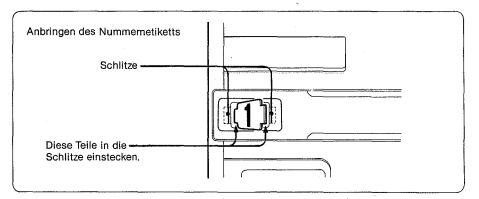
Zum Sichern des Objektivs, nachdem es in den Vorsprung vorne oben am Kamerakopf eingesetzt worden ist.

4 Objektivanschluß (36pol)

Dieser Anschluß ist die Schnittstelle des Objektivs für die Objektiv-Steuersignale. Außerdem ist über diesen Anschluß auch die Stromversorgung des Objektivs möglich. (Über die zur BVP-370P passenden Objektivmodelle erkundigen Sie sich bitte bei Ihrer Sony-Vertretung bzw. beim jeweiligen Objektiv-Hersteller.)

45 Nummernetikett (mitgeliefert)

Die jeweilige Kamera mit dem zugehörigen Nummernetikett versehen.



46 Vordere Abdeckung

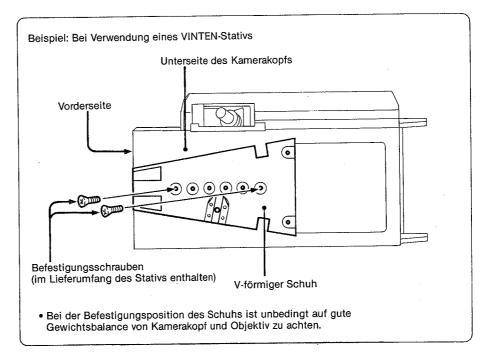
Die Abdeckung ist werksseitig auf die Vorderseite des Kamerakopfs aufgesetzt. Die Abnahme dieser Abdeckung ist in Absatz "1-4-2. Anbringen des Objektivs am Kamerakopf" beschrieben.

1-4. Aufbau des Systems

1-4-1. Anbringen des Kamerakopfs auf einem Stativ

Vorgehen beim Systemaufbau:

- 1 Den Kamerakopf mit der Seite auf eine stabile Unterlage legen.
- 2 Den V-förmigen Schuh (im Lieferumfang des Stativs enthalten) an der Unterseite des Kamerakopfs anbringen.

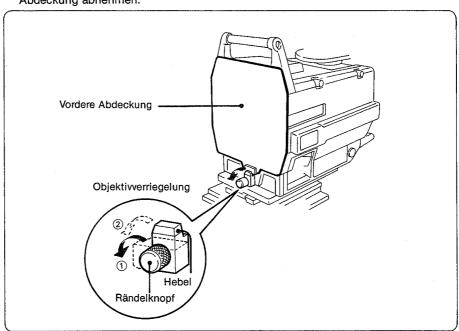


3 Die Kamera an der Kameraplatte des Stativs befestigen.

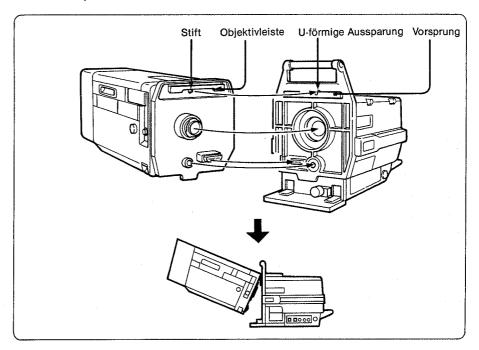
1-4-2. Anbringen des Objektivs am Kamerakopf

Folgendermaßen vorgehen:

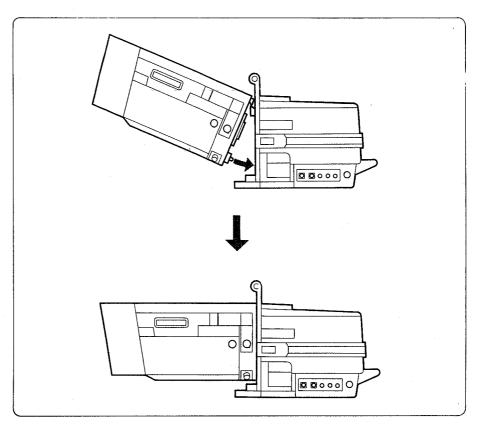
1 Den Rändelknopf der Objektivverriegelung vorne unten am Kamerakopf (①) losdrehen und den Hebel gemäß der Abbildung (②) drehen. Danach die vordere Abdeckung abnehmen.



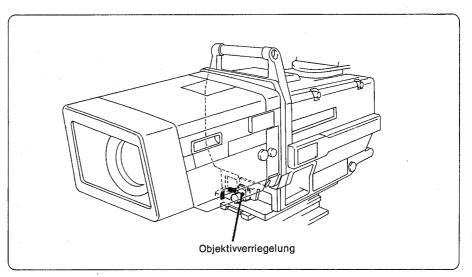
2 Den Stift am Objektiv mit der U-förmigen Aussparung am Vorsprung an der oberen Vorderseite des Kamerakopfs fluchten und die Objektivleiste in den Vorsprung des Kamerakopfs einhaken.



3 Das Objektiv in den Kamerakopf einrasten.

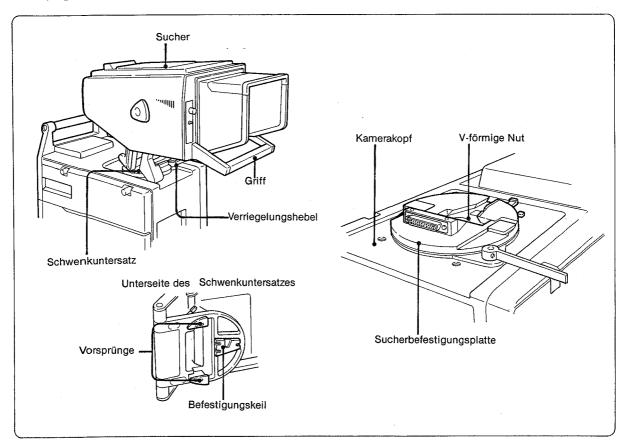


4 Den Hebel der Objektivverriegelung wie in der Abbildung gezeigt drehen und anschließend den Rändelknopf im Uhrzeigersinn festdrehen.



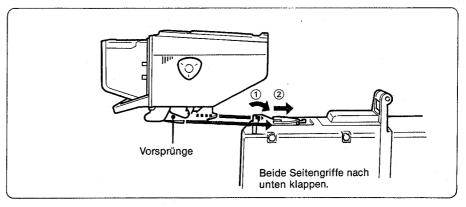
1-4-3. Anbringen des Suchers an der Kamera

Notwendige Teile zum Anbringen des Suchers an der Kamera

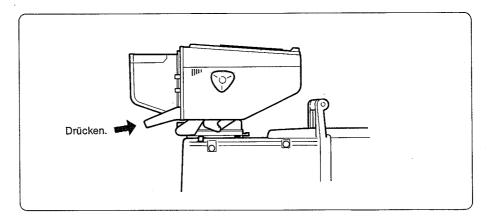


Anbringen des Suchers

1 Den Sucher so auf der Sucherbefestigungsplatte an der Kamera positionieren, daß beim Bewegen nach vorne der Befestigungskeil an der Unterseite des Schwenkuntersatzes in die V-förmige Nut der Sucherbefestigungsplatte eingreift. Dadurch werden die Vorsprünge an der Unterseite des Schwenkuntersatzes in die Positionen gebracht, die in der Abbildung gezeigt sind.

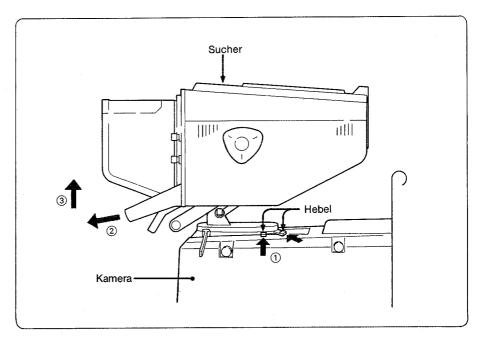


2 Den Sucher am Griff so nach vorne drücken, daß der Schwenkuntersatz sicher von der Sucherbefestigungsplatte fixiert wird.



Abnehmen des Suchers

Wie durch die Pfeile 1 gezeigt, gleichzeitig auf die beiden Hebel drücken, dann den Griff zum Körper ziehen (2) und den Sucher nach oben abnehmen.

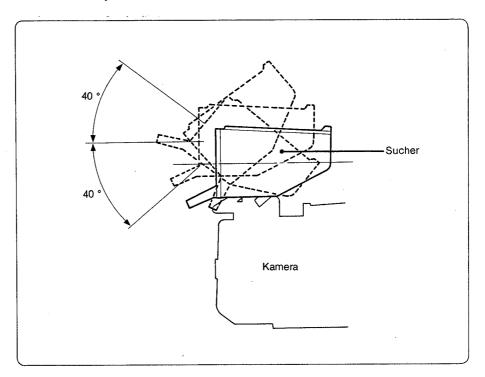


1-5. Winkeleinstellung des Suchers

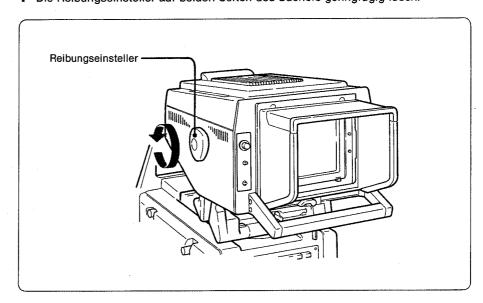
Die Winkelneigung des Suchers läßt sich so einstellen, daß sein Bildschirm mühelos betrachtet werden kann.

Neigen des Suchers

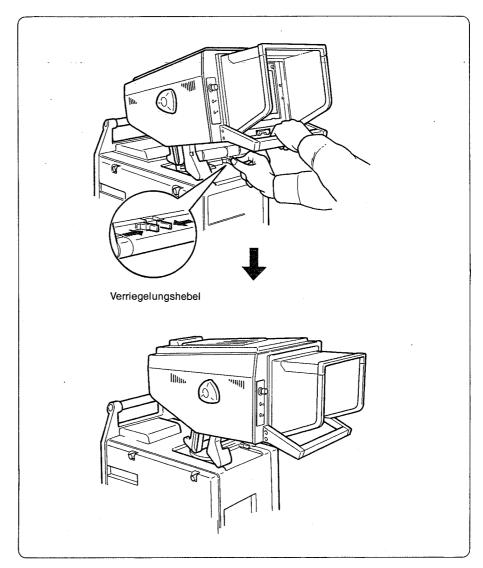
Der Sucher kann jeweils um 40 ° nach oben oder unten gedreht werden.



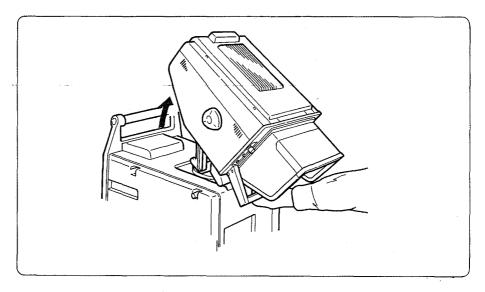
1 Die Reibungseinsteller auf beiden Seiten des Suchers geringfügig lösen.



2 Die Verriegelungshebel des Suchers zusammendrücken und gleichzeitig den Sucher bis zum oberen Anschlag hochziehen. Der Sucher rastet beim Loslassen der Hebel in dieser Stellung ein.



3 Nun den Neigungswinkel des Suchers nach Wunsch einstellen.



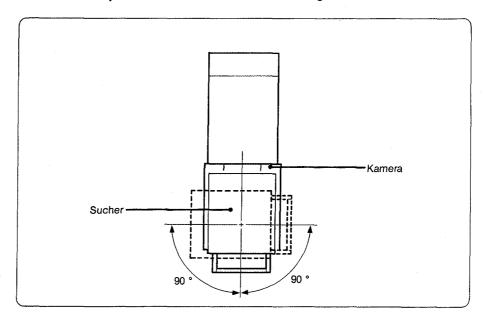
4 Die Reibungseinsteller festdrehen.

Zur Beachtung

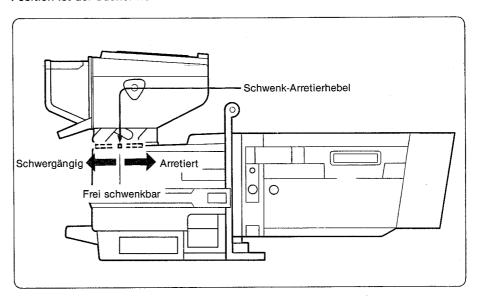
Bringen Sie den Sucher vor einem Transport der Kamera durch Absenken in seine Normalstellung und drehen Sie dann die Reibungseinsteller fest.

Schwenken des Suchers

Der Sucher kann jeweils um 90 ° nach links oder rechts gedreht werden.



Der Schwenk-Arretierhebel bewirkt folgendes: in der hinteren Position läßt sich der Sucher schwergängig gegen einen Reibungswiderstand drehen; in der mittleren Position ist der Sucher frei schwenkbar und in der vorderen Position arretiert.



Schwergängiger Sucherschwenk (Reibungswiderstand)

In dieser Hebelstellung bewegt sich der Sucher nur schwergängig nach links oder rechts, auch wenn die Kamera bei der Aufnahme bewegt wird. Der Sucher kann jedoch auch in diesem Fall mit einem etwas größeren Kraftaufwand als bei der frei schwenkbaren Position um 90 ° nach beiden Seiten geschwenkt werden.

Freier Sucherschwenk

Der Sucher kann sehr leicht um 90 ° nach beiden Seiten geschwenkt werden.

Arretierposition des Suchers

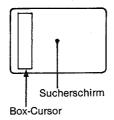
Der Sucher ist in seiner Stellung fixiert, kann jedoch geringfügig bewegt werden.

1-6. Anzeigen im Sucher

1-6-1. Eingeblendete Markierungen

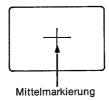
Durch Betätigung der dafür vorgesehenen Bedienelemente lassen sich Box-Cursor, Mittelmarkierung, Sicherheitszone und Zoompositionsmarkierung auf dem Sucherschirm bringen.

Box-Cursor



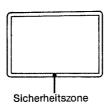
Der Box-Cursor erscheint beim Drücken der CURSOR-Taste auf dem Sucherschirm. Bei erneutem Tastendruck verschwindet er wieder.

Mittelmarkierung



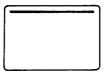
Steht der CENTER MARKER-Schalter auf ON, so wird in die Suchermitte ein weißes Kreuz eingeblendet, das bei Schalterstellung OFF nicht zu sehen ist. Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.

Sicherheitszone



Steht der SAFETY ZONE-Schalter auf ON, so wird auf dem Sucherschirm ein Rahmen (als Markierung der Sicherheitszone) eingeblendet, dessen Fläche 90% des Aufnahmebilds umfaßt. In Schalterstellung OFF ist dieser Rahmen nicht sichtbar. Mit einem internen Schalter läßt sich die Sicherheitszone bis auf 80% steigern. (Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.)

Markierung der Zoomposition



Durch entsprechende Betätigung eines internen Schalters kann die Zoomposition auf dem Sucherschirm markiert werden. Einzelheiten hierzu entnehmen Sie bitte Teil 2 und den folgenden Abschnitten.

1-6-2. Textanzeigen auf dem Sucherschirm

Die BVP-370P kann auf dem Sucherschirm Textanzeigen darstellen, die unter die beiden Gruppen Status- und Warnanzeigen fallen.

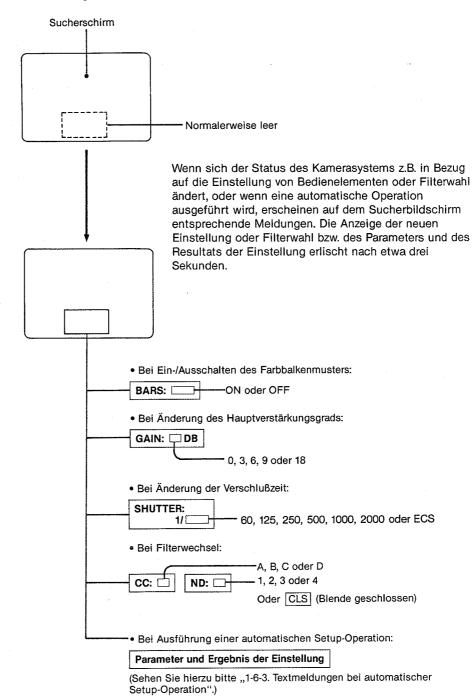
Statusanzeigen

Anhand der Statusanzeigen kann der Kameramann die Einstellungen von Bedienelementen, Parametern und Resultaten der Automatikeinstellungen und den Betriebszustand von Platinen überprüfen und bestätigen. Die Statusinformationen verteilen sich auf fünf "Seiten", die mit Hilfe des DISPLAY-Schalters an der Rückseite umgeschaltet werden können. In Schalterstellung ON ist die Kamera zur Anzeige von Statusinformationen auf Seite 1 bereit, die normalerweise leer ist. Sobald sich jedoch der Setzzustand eines Bedienelements ändert oder eine automatische Setup-Operation abläuft, so erscheint die neue Einstellung bzw. der Parameter und das Resultat der Automatikeinstellung in Textform auf Seite 1. In Schalterstellung ON läßt sich der Seiteninhalt durch Drücken des Schalters nach oben in Stellung PAGE ändern. Bei jeder derartigen Schalterbetätigung wird die Seitenzahl in folgender Weise weitergeschaltet:

$$\rightarrow$$
 (Seite) 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 1 $-$

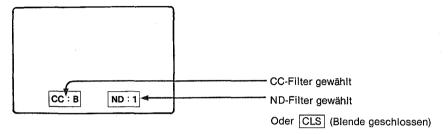
Die Seitengliederung ist im einzelnen wie folgt:

Statusanzeige, Seite 1



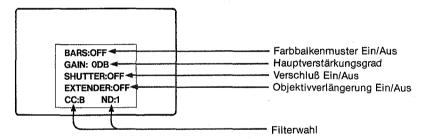
Statusanzeige, Seite 2

Die aktuellen Vorgabewerte für ND- und Farbkonversionsfilter werden angezeigt. (Beispiel)



Statusanzeige, Seite 3

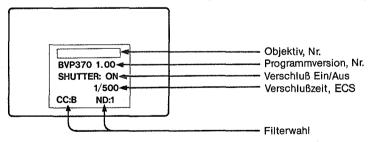
Der aktuelle Status in bezug auf Einschaltzustand des Farbbalkenmusters, Hauptverstärkungsgrad, Einschaltzustand des Verschlusses und der Objektivverlängerung sowie die Filterwahl werden angezeigt. (Beispiel)



Statusanzeige, Seite 4

Nummer von Objektiv und Programmversion, Verschlußzustand, Verschlußzeit und Filterwahl werden angezeigt.

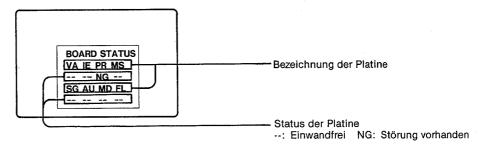
(Beispiel)



Statusanzeige, Seite 5

Der Status der einzelnen Platinen im Kamerainneren wird durch eine Eigenprüfung festgestellt und dann auf dem Sucherschirm angezeigt.

(Beispiel)



Warnanzeigen

Falls in der Datenübertragungsleitung zwischen Kamera und Kamera-Steuereinheit eine Störung auftritt, erscheint unabhängig von der Stellung des DISPLAY-Schalters eine Warnmeldung bzw. das Ergebnis der Eigenprüfung auf dem Sucherschirm.

NO CCU DATA

Diese Meldung blinkt, wenn die Übertragung serieller Daten von der Kamera-Steuereinheit zur Kamera ausgesetzt hat.

FRAMING ERR PARITY ERR

Je nach Art des Fehlers erscheint eine dieser beiden Meldungen blinkend auf dem Sucherschirm, wenn bei den seriellen Daten von der Kamera-Steuereinheit ein Fehler festgestellt worden ist.

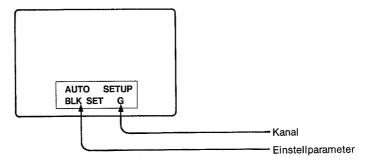
BETRIER

1-6-3. Textmeldungen bei automatischer Setup-Operation

Anzeigen während der automatischen Setup-Einstellung

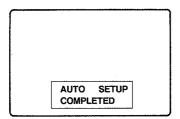
Wird eine automatische Setup-Operation ausgeführt, wenn die Kamera zur Anzeige von Seite 1 bereit ist, so werden in Textform u.a. der Einstellparameter und der von der Einstellung betroffene Kanal angezeigt.

(Beispiel)



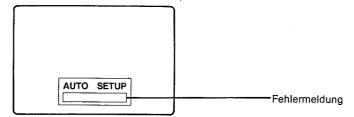
Anzeige über Abschluß der Einstellung

Sobald die automatische Setup-Einstellung abgeschlossen ist, erscheint folgende Anzeige auf dem Sucherschirm:



Wird während einer automatische Setup-Einstellung ein Fehler festgestellt, so erscheint eine entsprechende Meldung gemäß der nachfolgenden Tabelle.



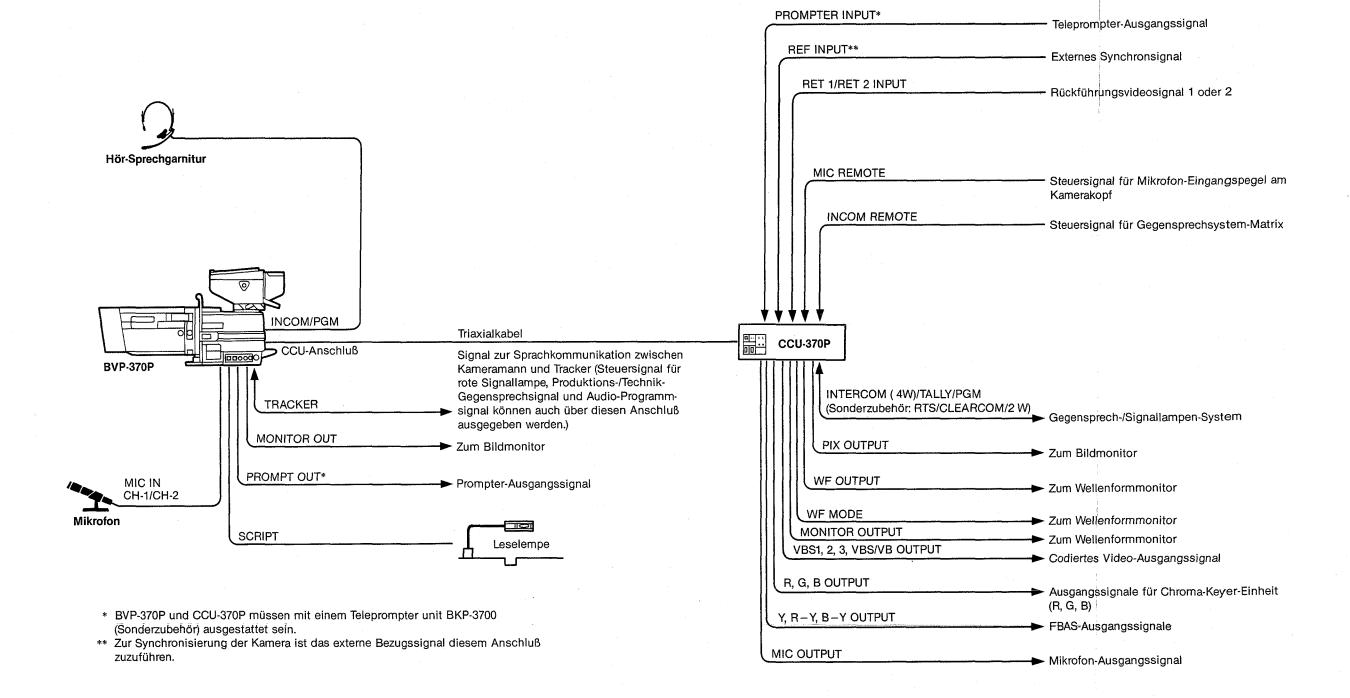


• Auf dem Sucherschirm der BVP-370P können folgende drei Fehlermeldungen angezeigt werden:

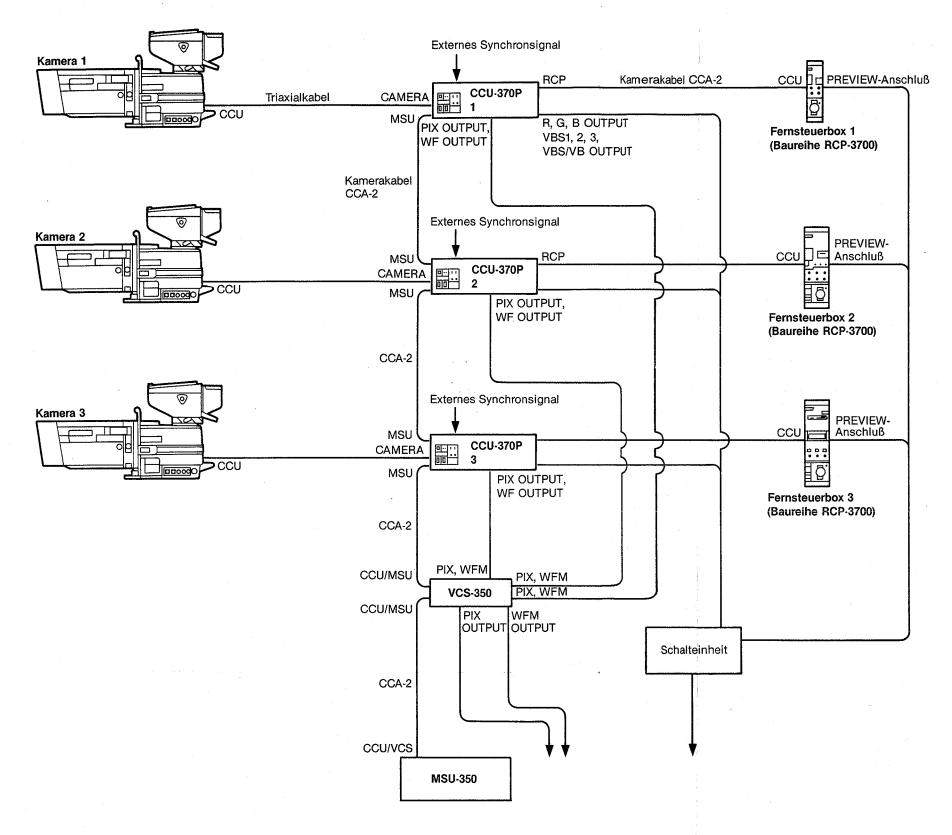
Fehlermeldung	Bedeutung
-OVER FLOW-	Der Unterschied zwischen aktuellem Wert und Bezugswert ist so groß, daß der für automatische Einstellungen mögliche Bereich überschritten ist.
-TIME LIMIT-	Einstellung innerhalb des vorgegebenen Zeitrahmens unmöglich.
-LOW LEVEL-	Videoausgangspegel zu niedrig für eine zufriedenstellende Einstellung. Beleuchtungsstärke erhöhen oder höheren Hauptverstärkungsgrad einstellen.

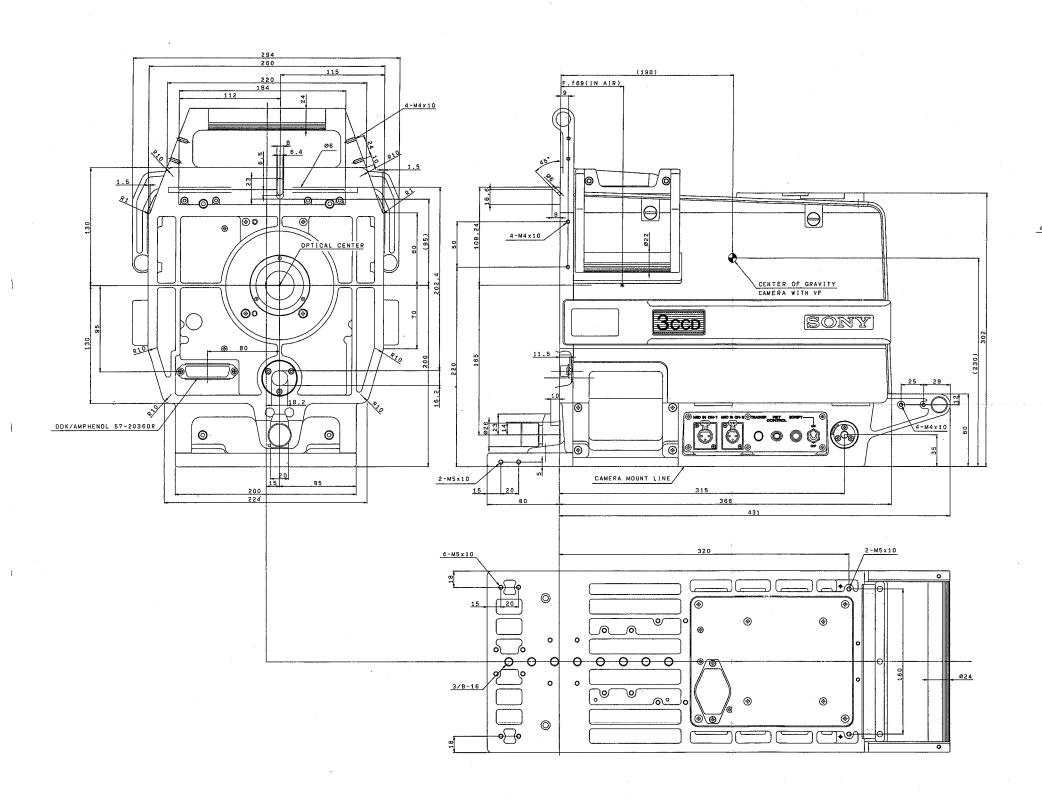
1-7. Systemverkabelung

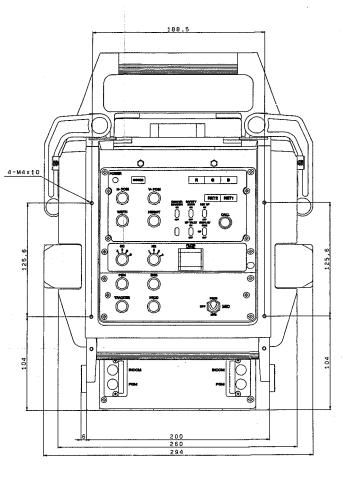
1-7-1. Betrieb einer Kamera zusammen mit der Kamera-Steuereinheit CCU-370P



1-7-2. Betrieb mehrerer Kameras



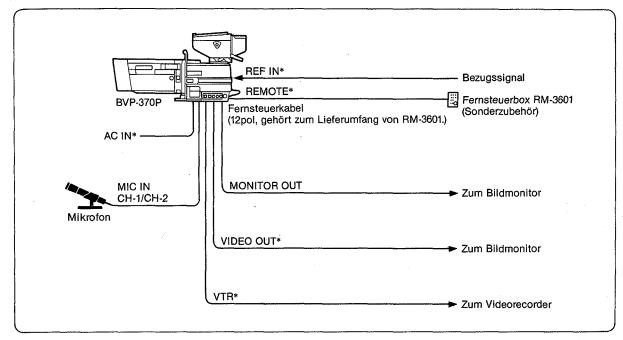




1-7-3. Einzelbetrieb der Kamera

Zum Einzelbetrieb der Kamera BVP-370P ist der Einzelbetrieb-Adaptersatz BKP-370P erforderlich.

Die BVP-370P kann zusammen mit der Fernsteuerbox RM-3601 betrieben werden, wenn eine Modifikation im Kamerakopf vorgenommen wird. Ihre Sony-Vertretung gibt Ihnen hierzu gerne ausführliche Auskunft.



* Anschluß an Einzelbetrieb-Adaptersatz BKP-370P

1-8. Technische Daten

Allgemeines

Bildwandler

2/3-ZoII-FIT-CCD-Sensor

(Frame Interline Transfer Charge Coupled Device) RGB, 3 CCDs

Konfiguration Bildelemente Spektralsystem Eingebaute Filter

 $752(h) \times 582(v)$ F1,4, Prismensystem

Konversionsfilter

A: Kreuzfilter

B: 3200 K

C: 4300 K

D: 6300 K

ND-Filter

1: Klar

2: 1/4 ND

3: 1/8 ND

4: 1/16 ND

Empfindlichkeit 2000 Lux (F8 typisch)

89,9% Reflexion

Mindestbeleuchtung ca. 7,5 Lux

(F1,4, bei einer Pegelanhebung von 18 dB)

Video-Signal-Rausch-

abstand

60 dB (typisch) 700 Zeilen (in der Mitte)

Horizontalauflösung

700 Zenen (in der witte)

Farbdeckung

max. 0,05% über den gesamten Bildschirm

(ohne Objektiv)

Geometrische Verzeichnungen

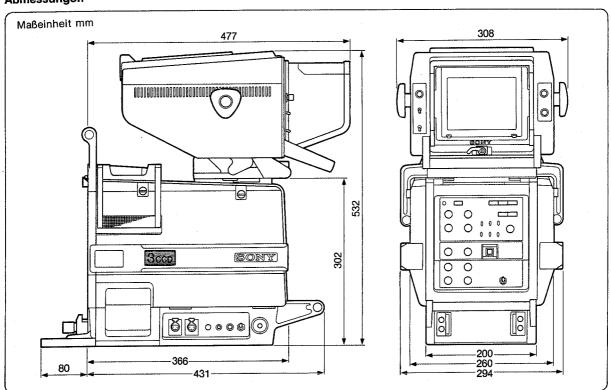
Verzeichnungen Betriebstemperatur

Gewicht

keine

-20 °C bis +45 °C ca. 20 kg (ohne Sucher)

Abmessungen



Ein- und Ausgangsanschlüsse

Fischer-Triaxial-Anschluß (1) CCU Objektiv-Anschluß 36pol, (1) Sucherbuchse 25pol (1) MONITOR OUT **BNC (1)** 1,0 Vss, 75 Ω BNC (1) PROMPT OUT* 1,0 Vss, 75 Ω **BNC (1) REF IN*** 1,0 Vss, 75 Ω BNC (1) **VIDEO OUT**** FBAS: 1,0 Vss VTR** 26pol 3pol AC OUT 3pol AC IN** **TRACKER** 10pol (1) **RET CONTROL** 6pol (1) **SCRIPT** 4pol (1) max. 5 W, 12 V Gleichsspannung Doppelbuchsen (2) INCOM/PGM XLR, 3pol (jeweils 1) MIC IN CH-1, CH-2 $-60\,\mathrm{dB}$

^{*} Teleprompter-Adaptersatz BKP-3700 ist erforderlich.

^{**} Nur bei Verwendung von Einzelbetrieb-Adaptersatz BKP-370P.

Zubehör

Erweiterungskarte A (1)
Steckverbinder für TRACKER-Anschluß (10pol) (1)
Steckverbinder für RET CONTROL-Anschluß (6pol) (1)
Steckverbinder für SCRIPT-Anschluß (4pol) (1)
Rote Signallampe (2)
Sicherung (6.3A) (1)
Sicherung (4 A) (3)
Sicherung (630mA) (1)
Metall-Befestigungsteile (2)
Vordere Abdeckung (1)
Kamera-Nummernetikett (2 Sätze)
Bedienungs- und Wartungsanleitung (1)

Sonderzubehör

Teleprompter-Adaptersatz BKP-3700 Kontrastregeleinheit BKP-3701 7-Zoll- Monochrom-Sucher BVF-77CE 7-Zoll- Farbsucher BVF-7700P Monitorblendschutz VFH-770(für BVF-77CE/7700P bei Verwendung im Freien) Skripthalter BKP-3613/3614 (mit Leselampe) Einzelbetrieb-Adaptersatz BKP-370P

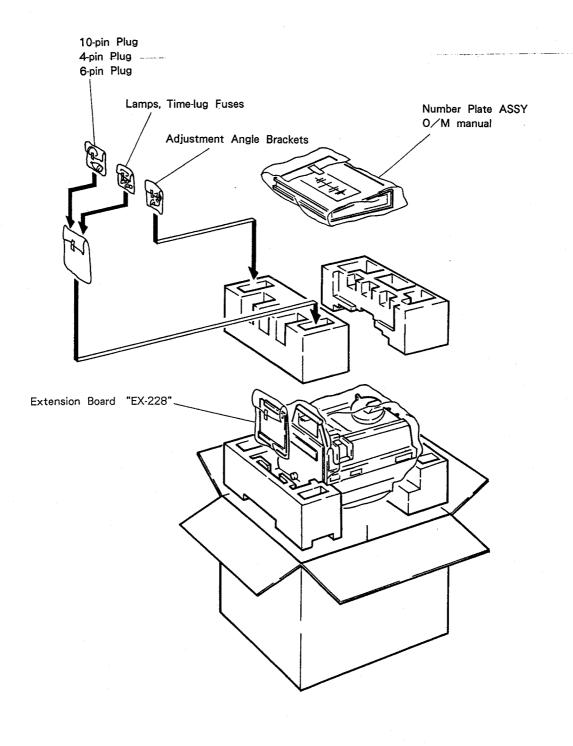
Empfohlene Komponenten

Kamera-Steuereinheit CCU-370P Fernsteuerbox RCP-3710/3711/3720/3721/3730/3731 Master-Setup-Einheit MSU-350 Video-Selector VCS-350 Fernsteuerbox RM-3601

Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

SECTION 2 INSTALLATION

2-1. PACKING AND UNPACKING



2-2. SUPPLIED ACCESSORIES

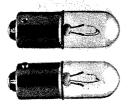
Extension Board "EX-228": 1



Number Plate ASSY: 1

		_	_	_
1 C		5	O	5
•	•			
			1	6
		6		U
			A	
12		7	2	7
4	•		-	-
	•	0	9	\mathbf{O}
	5	8	3	81
				_
		9	4	9 1
		J .	T	J

Tally Lamps: 2



10-pin Plug: 1



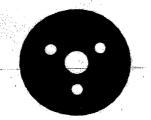
4-pin Plug: 1



6-pin Plug: 1



Adjustment Angle Brackets: 2



Time-lug Fuses: 5

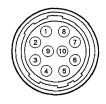
Operation and Maintenance Manual:1

2-3. CONNECTORS AND CABLES

2-3-1. Connector Input and Output Signals

Main connector input and output signals are shown below.

TRACKER (10P, FEMALE)



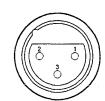
No.	SIGNAL	SPECIFICATION
1	TRACKER R OUT(X)	TRACKER RECEIVE 0dBs. UNBALANCED
2	NC	
3	TRACKER R OUT(G)	GND for TRACKER R
4	TRACKER PGM OUT(X)	- 20dBs. UNBALANCED
5	+12V(T)OUT	+12Vdc. 100mA(MAX)
6	TRACKER PGM OUT(G)	GND for TRACKER PGM
7	TRACKER T IN(X)	TRACKER TALK
8	TRACKER T IN(Y)	0dBs/ — 20dBs High impedance BALANCED
9	UP TALLY OUT(G)	
10	UP TALLY OUT(X)	+12Vdc 200mA(MAX)

SCRIPT (4P, FEMALE)



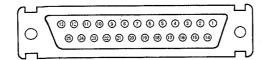
No.	SIGNAL	SPECIFICATION
1	GND	GND for POWER
2	NC	Non connection
3	NC	Non connection
4	+12V OUT	+12Vdc. 400mA(MAX)

MIC IN CH-1, CH-2 (3P, FEMALE)



No.	SIGNAL	SPECIFICATION
1	MIC IN(G)	60dBs
2	MIC IN(X)	High impedance
3	MIC IN(Y)	BALANCED

VF (25P, FEMALE)

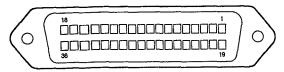


No.	SIGNAL	SPECIFICATION
1	VF R VIDEO OUT(X)	* V=714mVp-p(NTSC) V=700mVp-p(PAL) Zo=75 Ω ± 5%POSI
14	VF R VIDEO OUT (R)	GND for VF R VIDEO
2	NC	Non connection
15	NC	Non connection
3	VF G OUT(X)	B/W:Y/RET, COLOR:G/RET Zo=75 Ω ± 5% 1Vp-p
16	VF G VIDEO OUT(G)	GND for VF G VIDEO
4	NC	Non connection
17	CHASSIS GND	CAHSSIS GND
5	VF B VIDEO OUT(X)	* V=700mV ± 2%(100%) Zo=75 Ω ± 5%
18	VF B VIDEO OUT (G)	GND for VF B VIDEO
6	RET ON OUT	* ON:0+0.5V OFF:High impedance OPEN COLLECTOR
19	VF DC GND	GND for +12V(VF)
7	+12V (VF)OUT	+12Vdc(at 4A)
20	VF DC GND	GND for +12V(VF)
8	+12V(VF)OUT	+12Vdc (at 4A)
21	TALLY GND	GND for TALLY

No.	SIGNAL	SPECIFICATION
9 .	UP TALLY ON OUT	ON:+12V OFF:Hihg impedance OPEN COLLECTOR
22	VF RETURN VIDEO OUT(G)	GND for VF RETURN VIDEO
10	VF RETURN VIDEO OUT(X)	* V=1.0Vp-p \pm 2%(100%) Zo=75 Ω \pm 5%
23	G TALLY ON OUT	ON: $5V \pm 0.5V$ (Z _R =300 Ω) OFF:0+0.5V
11	R TALLY ON OUT	$\begin{array}{c} \text{ON:} 5\text{V} \pm 0.5\text{V} \\ \text{(ZR=300}\; \Omega\;) \\ \text{OFF:} 0+0.5\text{V} \end{array}$
24	NC	Non connection
12	VF SEL COL/BW IN	
25	NC	Non connection
13	NC	Non connection

^{*} This signals is output only when the switch S6 (VF SELECT)/MS-33 board [PANEL] is set to "COLOR"

LENS (36P, FEMALE)



(EXT VIEW)

No.	SIGNAL	SPECIFICATION
1	NC	Non connection
19	NC	Non connection
2	NC	Non connection
20	NC	Non connection
3	NC	Non connection
21	LENS R TALLY ON OUT	ON:L OFF:H Zo=1k Ω
4	+12V(LENS)OUT	+12V(at 2A)
22	NC	Non connection
5	LENS DC GND	GND for +12V(LENS)
23	RET 3 ON IN	Zi ≧ 10k Ω ON:L OFF:Highimpedance
6	GND	GND
24	LENS ADRS 0 IN	*1
7	NC	Non connection
25	LENS ADRS 1 IN	*1

No.	SIGNAL	SPECIFICATION
8	LENS EX1 ON IN	*2
26	LENS ADRS 2 IN	*1
9	LENS EX2 ON IN	*2
27	LENS ADRS 3 IN	*1
10	LENS EX3 ON IN	*2
28	EXTENDER 1 ON OUT	ON:GND OFF:High impedance
11	NC	Non connection
29	EXTENDER 2 ON OUT	ON:GND OFF:High impedance
12	IRIS POSI IN	$Zi \ge 10k \Omega$ 2 to 7V "3.4 ± 0.1V(F16)" "6.2 ± 0.1V(F2.8)"
30	NC	Non connection
13	ZOOM POSI IN	Zi ≥ 10k Ω 2 to 7V "2V(WIND), 7V(TELE)"
31	INCOM 1 ENG/PRD IN	Zi ≧ 10k Ω ENG:GND PRD:High impedance
14	RET 1 ON IN	Zi ≧ 10k Ω ON:L OFF:High impedance
32	INCOM 2 ENG/PRD IN	Zi ≥ 10k Ω ENG:GND PRD:High impedance
15	RET 2 ON IN	Zi ≧ 10k Ω ON:L OFF:High impedance

No.	SIGNAL	SPECIFICATION
33	INCOM MIC 1 ON IN	Zi ≧ 10k Ω ON:GND OFF:High impedance
16	FOCUS POSI IN	$Zi \ge 10k \Omega$ 2 to TV "2V(MIN), $TV(\infty)$ "
34	INCOM MIC 2 ON IN	Zi ≧ 10k Ω ON:GND OFF:High impedance
17	IRIS CONT OUT	2 to 7V "3.4 \pm 0.1V(F16)" "6.2 \pm 0.1V(F2.8)" Zi \geq 10k Ω
35	REGI VD OUT	
18	IRIS AUTO/MANU OUT	AUTO:L MANU:H Zi ≧ 10k Ω
36	LENS DC GND	GND for LENS

- *1 Zi ≥ 10kΩ
 1: High impedance
 0: 0+0.5V
 LENS ADRS 0 (Low-order bits)
 LENS ADRS 4 (High-order bits)
- *2 $Zi \ge 10k\Omega$ 1: High impedance 0: 0 ± 0.5V

EX1	EX2	EX3	MODE
1 1 0 0	1 0 1 0	1 1 1	EXTENDER OFF EXT-1(× 1.5) EXT-2(× 2) EXT-3(× 2.5)

RET CONTROL (6P, FEMALE)



No.	SIGNAL	SPECIFICATION
1	INCOM 1 MIC ON IN	Zi ≥ 10k Ω ON:GND OFF:OPEN
2	INCOM 2 MIC ON IN	$Zi \ge 10k \Omega$ ON:GND OFF:OPEN
3	GND	
4	NC	Non connection
5	RET 1 ON IN	$Zi \ge 10k \Omega$ ON:GND OFF:OPEN
6	RET 2 ON IN	$Zi \ge 10k \Omega$ ON:GND OFF:OPEN

2-3-2. Connector

When cable with connectors are set to the respective connectors on the connector panel during installation or service, the specified or equivalent connectors with cables, or the specified cable assemblies should be used, these are listed as follows;

Connector function		Parts No. and name of connector with cable
TRACKER	(10P. FEMALE)	1-506-522-11 HIROSE HR10R-10P-10P equality
MIC	(3P, MALE)	1-508-083-11 XLR-3P, FEMALE CANON XLR-3-11C equality
SCRIPT	(4P, FEMALE)	1-560-343-11 HIROSE KMC9BPG-4P equality
RET CONTROL	(6P, FEMALE)	1-560-078-31 HIROSE HR10-7PA-6P equality
VF	(25P, FEMALE)	1-560-904-11 JAE DBC-25P-FD equality
MONITOR OUT PROMPT OUT	(BNC)	1-560-069-11 PLUG, BNC

2-4. SETUP

- Attach the camera head to the tripod. (For details refer to Section 1-4-1. "Attaching the Camera Head to the Tripod".)
- 2. Attach the lens to the camera head. (For details, refer to Section 1-4-2. "Attaching the Lens to the Camera Head".)
- Attach the viewfinder to the camera head. (For details, refer to Section 1-4-3. "Attaching the viewfinder to the Camera Head".)
 If the viewfinder VF-502 is to be attached, refer to the operation manual for the VF-502.
- 4. Open the right and left side panels, referring to Section 3-1. "SIDE PANELS OPENING".
- Set the switches on the PC board shown below according to your requirement.
 Section 2-5 details switches' function.
 They are set to the position shown in Bold-Face type at the factory.

AU-129 Board

- S1(PGM1 MIX)[D-8] "ON ↔ OFF"
 S2(PGM2 MIX)[D-9] "ON ↔ OFF"
- S5(TRK LEVEL)[I-15] "0dBs ↔ 20dBs"
 S6(INCOM1 GAIN)[PANEL] "-6dB ↔ 0dB ↔ +6dB"
- S6(INCOM1 GAIN)[PANEL] BUB → BUB • S7(CARBON/DYNAMIC)[PANEL]
- "C ↔ D"

 S8(INCOM2 GAIN)[PANEL] " 6dB ↔ 0dB ↔ +6dB"

 S9(CARBON/DYNAMIC)[PANEL]
- "C ↔ D"

 S10(MIC POWER)[PANEL] "ON ↔ OFF"

MS-33 Board

• S1(SAFETY ZONE)[PANEL]

"80% ↔ **90**%"

S2(ZOOM INDICATOR)[PANEL]

"**A** ↔ B"

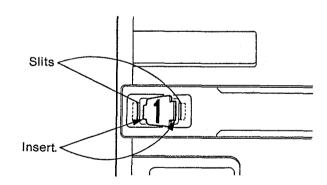
- S3(ZOOM IND ON)[PANEL] "ON ↔ OFF"
- S4(CENT MARKER V POS)[PANEL] "0~6"
- S5(CALL)[PANEL] "ON ↔ OFF"
- S6(VF SELECT)[PANEL] "B/W ↔ COLOR"
- S7(MONITOR OUT SELECT)[PANEL]

"VF ↔ RET"

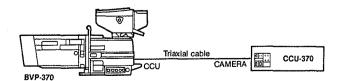
- 6. Connector the camera to the CCU with a triax cable. See the Figure below.
- 7. Turn on the power of CCU and supply the power to the camera. Make sure that the power indicator on the rear panel of the camera lights up and the camera operates.
- 8. Perform the following adjustments.
 - · Lens adjustments
 - Back focus distance adjustment
 - · Diascope position adjustment
 - Projector color-temperature adjustment
 - · White shading adjustment
 - · Auto-iris check
 - Intercom audio level check

Perform the lens adjustments referring to the lens manual. As for the other adjustments, refer to Section 5 "ALIGNMENT" in this manual.

Attach the number plate corresponding to the number of the connected camera.



10. Connector the peripheral devices according to use.



2-5. FUNCTION OF SWITCHES ON PC BOARD

AT-54 board

S1: MODE SELECT

S2: DATA

When setting the switch S1 to "0" and S2 to UP, analog control data except the master black data is preset. When setting the switch S1 to "1" and S2 to UP, auto-iris OVERWRITE data is preset to center of reference value.

After presetting, be sure to set the switch S1 to F. Consult your authorized Sony representative for details on other functions.

AU-129/AU-129P board

S1: PGM 1 MIX

BVP-370:

When the switch is set to ON, the INCOM 1 signal and PGM 1 signal are mixed each other mixed signal is output as INCOM 1 output and PGM 1 output. When this switch is set to OFF, the INCOM 1 OUT signal and PGM 1 OUT signal are independently.

Normally set to OFF. BVP-370P: Be sure to set the switch to OFF.

S2: PGM 2 MIX

BVP-370:

When the switch is set to ON, the INCOM 2 signal and PGM 2 signal are mixed each other, mixed signal is output as INCOM 2 output and PGM 2 output. When this switch is set to OFF, the INCOM 1 OUT signal and OUT signal are 1 independently. Normally set to OFF.

BVP-370P: Be sure to set the switch to OFF.

S3: TRK PGM

Set the switch only when using the TRACKER connector. When mixing the PGM signal with the TRACKER output signal, set it to ON. Factory-setting is ON.

S4: TRK INCOM 2

Set this switch only when using the TRACKER connector. When the switch is set to ON, the INCOM 2 signal is mixed with the TRACKER output signal. The INCOM 1 signal is always output as TRACKER output signal.

This switch is factory-set to ON.

S5: TRK LEVEL.

Input level 0 dBs or -20 dBs is selectable. Normally set to 0 dBs.

S6: INCOM 1 GAIN

This switch selects the INCOM 1 audio level, which is sent to the CCU. Set the switch S6 to -6 dB, 0 dB or +6 dB to meet the input level.

This switch is factory-set to 0 dB.

S7: CARBON/DYNAMIC

This switch selects the type of the INCOM 1 microphone, DYNAMIC or CARBON in accordance with the microphone is use. Factory-setting is C (CARBON).

• S8: INCOM 2 GAIN

This switch selects the INCOM 2 audio level, which is sent to the CCU. Set the switch S8 to -6 dB, 0 dB or +6 dB to meet the input level. This switch is factory-set to 0 dB.

S9: CARBON/DYNAMIC

This switch selects the type of the INCOM 2 microphone, DYNAMIC or CARBON in accordance with the microphone in use.

Factory-setting is C (CARBON).

S10: MIC POWER

When a microphone such as the Sony C-38B, which is phantom-powered, is used, set the switch to ON. Power will be supplied to the microphone via the MIC IN CH-1/CH-2 connector. Normally set to OFF.

IE-26/IE-26P board

S1: SKIN SET

Normally set to OFF.

Consult your authorized Sony representative for details on use of this switch. As for adjustment method, refer to Section 5-1-4 Note for Adjustment.

• S2: DTL

When this switch is set to ON, the detail function can be set to ON or OFF by the CCU. When this switch is set to OFF, image enhancement becomes inoperative as the instructions from the CCU is invalid.

This switch is normally set to ON.

S3: HF ON

When this switch is set to ON, the detail signal of boost frequency 10 MHz is output from the IE-26/26P board. Normally set to ON.

S4: LF ON

When this switch is set to ON, the details signal of boost frequency 5 MHz is output from the IE-26/26P board. Normally set to ON.

MS-33 board

S1: SAFETY ZONE

This switch selects size of safety zone frame, which is displayed on the viewfinder screen when the SAFETY ZONE switch on the rear panel is set to ON.

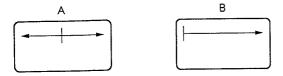
When this switch is set to 80%, the frame showing 80% of the picture shot by the camera is displayed. When this switch is set to 90%, the frame showing 90% of the picture is displayed.

This switch is factory-set to 90%.

S2: ZOOM INDICATOR

This switch selects indication mode of zoom position, which is displayed on the viewfinder screen, when the switch S3 (ZOOM IND ON) on the MS-33 board is set to ON.

Indication modes A and B are as follows.



This switch is factory-set to A.

• S3: ZOOM IND ON

When the switch is set to ON, the zoom position is displayed on the viewfinder screen. There are two indication modes, which can be selected by the switch S2 (ZOOM INDICATOR) on the MS-33 board.

This switch is factory-set to OFF.

S4: CENT MARKER V POS

This switch is used to set the CENT MARKER position in the vertical direction. Use this switch when the CENT MARKER position is aligned with the optical axis of lens. The switch is factory-set to "6".

• S5: CALL

By setting the switch to ON, UP TALLY lamp of the viewfinder or SIDE TALLY lamp of the camera head lights up when the CALL button of the MSU or RCP is pushed.

This switch is factory-set to OFF.

S6: VF SELECT

Set the switch in accordance with a viewfinder in use. Set the switch to B/W for use of monochrome viewfinder and set the switch to COLOR for use of color viewfinder. This switch is factory-set to COLOR.

S7: MONITOR OUT SELECT

This switch selects an output signal at the MONITOR OUT connector (BNC).

When the switch is set to VF, the VF video signal is output. When it is set to RET, the RET video signal is output.

This switch is factory-set to VF.

S8: GATE MARKER

When the switch is set to ON, you can observe where a gate to be detected appears on the viewfinder during auto setup adjustment.

Normally set to OFF.

PR-130 board

S1: GAMMA

When the switch is set to OFF, instruction from the CCU becomes invalid and gamma correction is always set to OFF.

Normally set to ON.

VA-86 board

S1: FLARE

When the switch is set to OFF, the flare compensation circuit on the VA-86 board, which is controlled by the potentiometer or the CCU, does not work. As a result, no-compensation signal is output.

Normally set to ON.

SG-167/167P board

• S1: B OFF

This switch is used to check and adjust the video signal system circuit for the TRIAX system.

Normally set to ON.

• S2: G OFF

This switch is used to check and adjust the video signal system circuit for the TRIAX system. Normally set to ON.

FILTER UNIT

• S1: MOTOR

When the switch is set to OFF, the motor for the motorized filter is turned off and it can be rotated manually.

Normally set to ON.

2-6. USE OF SUPPLIED PLUGS

The BVP-370/P supplies the 4-pin, 6-pin and 10-pin connector plugs as supplied accessory.
Use of these plugs are briefly described here.

2-6-1. Use of 10-pln Plug

This plug is used for the TRACKER connector on the right side connector panel. For details on the pin assignment and input/output signal specifications, refer to Section 2-3-1 Connector Input and Output signals. The input/output signals are described below.

Pins 1, 3: TRACKER RECEIVE OUT

Normally, only the INCOM1 signal sent from the CCU is output at pins 1 and 3 as the TRACKER output. As the INCOM1 signal, the PROD or ENG signal is selectable with the INCOM PROD/ENG switch on the rear panel.

By changing switch settings on the AU-129/129P board, the PGM signal on the INCOM2 signal can be mixed with the TRACKER output. The INCOM2 signal is the same as the INCOM1 signal, so the PROD or ENG signal is selectable.

The PGM signal is mixed when setting the switch S3 (TRK PGM) on the AU-129 board (address: E-15) to ON.

The INCOM2 signal is mixed when setting the switch S4 (TRK INCOM2) on the AU-129 board to ON.

Pins 7, 8: TRACKER TALK IN

0 dBs or -20 dBs of input levels can be selected by the switch S5 (TRK LEVEL) on the AU-129/129P board (address: I-15).

2-6-2. Use of 6-pin Plug

This plug is used for the RET CONTROL connector on the right side connector panel.

For details on the pin arrangement and input/output signal specifications, refer to Section 2-3-1.

This is available for remote switchings of the return video 1 and 2, mixed return video, and intercom microphone.

2-6-3. Use of 4-pin Plug

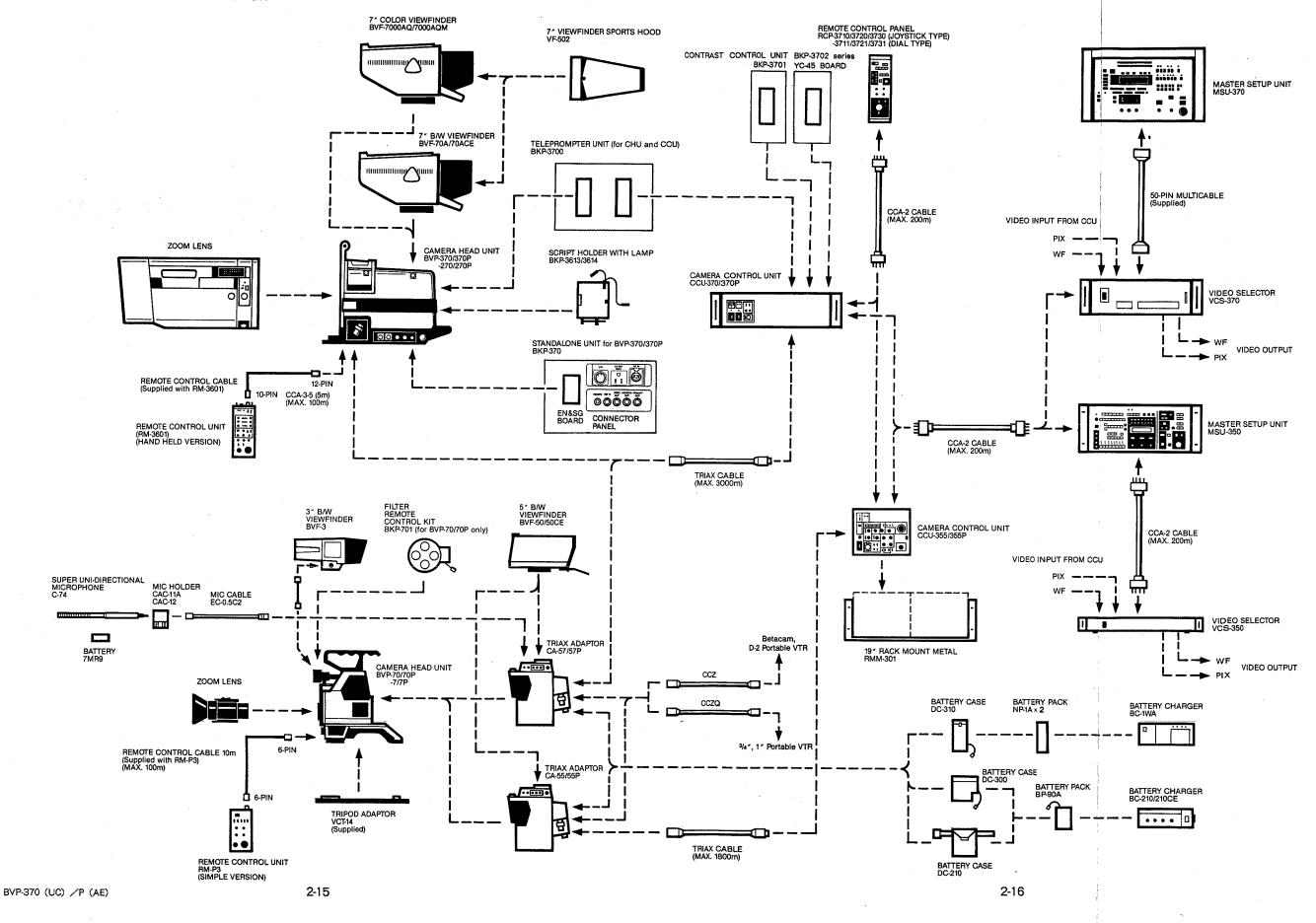
This plug is used for the SCRIPT connector on the right side connector panel.

Power supply for a script light is available.

For details on the pin arrangement and input/output signal specifications refer to Section 2-3-1.

If the script holder BKP-3613/3614 is used, this plug is not necessary.

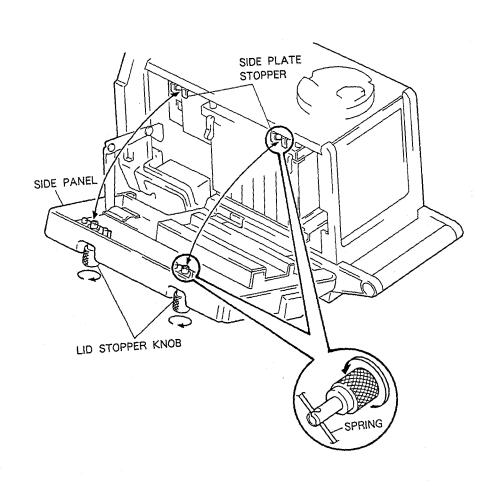
2-7. INSTANCE OF SYSTEM CONNECTION



SECTION 3 REPLACEMENT OF MAIN PARTS

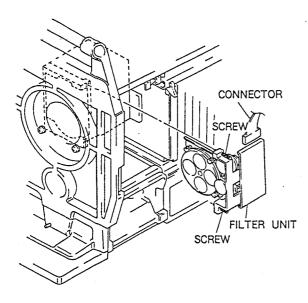
3-1. SIDE PANELS OPENING

- Turn the LID STOPPER KNOB counterclockwise to open the side panel.
- 2. To shut the side panel, match the spring of the SIDE PLATE STOPPER with the groove of the LID STOPPER KNOB to turn clockwise.



3-2. REPLACEMENT OF FILTER UNIT

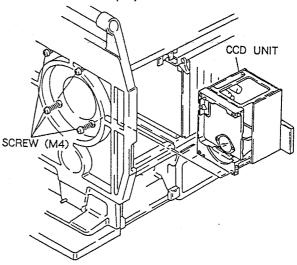
1. Remove the connector shown in the figure and loosen two screws. Remove the FILTER UNIT.



2. When installing the FILTER UNIT, reverse the prosedures for removal.

3-3. REPLACEMENT OF CCD UNIT

- 1. Remove the filter unit, referring to Section 3-2. REPLACEMENT OF FILTER UNIT, Step 1.
- 2. Loosen four screws (M4) and remove the CCD unit.

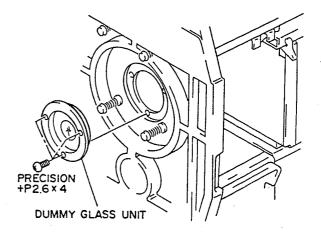


3. When installing a new CCD unit, reverse the procedures for removal.

When replacing the CCD unit having the following block number with the CCD unit of parts number A-7575-218-A or A-8267-490-A (only for BVP-370/370P), replacing the LOW PASS FILTER UNIT with the DUMMY GLASS UNIT of part number 1-547-403-11 is also required at the sametime. Proceed as follows. [Applicable Block Number]

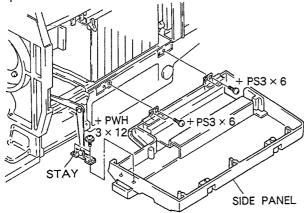
LxxxxxN, LxxxxxP

Remove three screws (PRECISION +P2.6 \times 4) fixing the LOW PASS FILTER UNIT. Attach the DUMMY GLASS UNIT with the three screws in place of the LOW PASS FILTER UNIT.

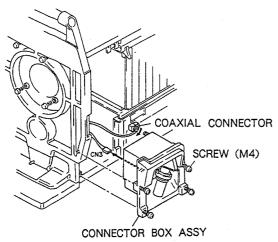


3-4. REPLACEMENT OF TRIAX CONNECTOR

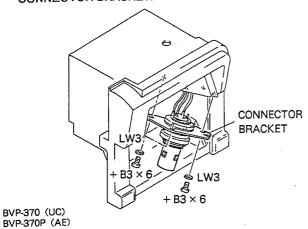
- Open the right side panel. Remove two screws (+PWH3 × 12) and remove the STAY.
- 2. Remove four screws (+PS3×6) and remove the side panel.



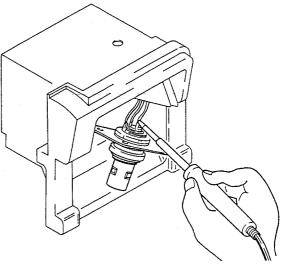
 Loosen four screws(M4) and remove the CONNECTOR BOX ASSY. At this time, do not pull it toward you forcibly. Disconnect the connector CN3 on the LF-15 board. Unscrew the coaxial connector in the direction of arrow.



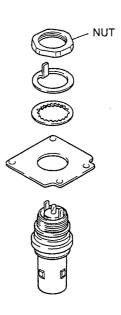
4. Remove four screws (+B3×6) and remove the CONNECTOR BRACKET.



5. Unsolder the three lead wires with a soldering iron.

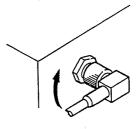


6. Remove the nut and disassemble the connector as illustrated.



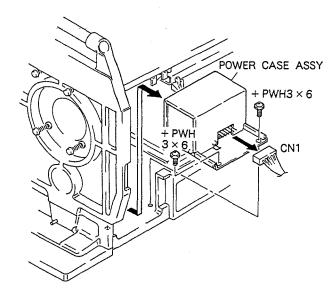
7. Install a new TRIAX connector by reversing the procedures for removal.

Note: When connecting the coaxial connector to the CONNECTOR BOX ASSY, tighten the screw and turn the connector head in the direction of arrow to fix it securely.

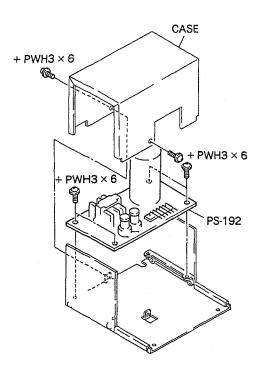


3-5. REMOVAL OF POWER CASE ASSY

- 1. Disconnect CN1 of the PS-192 board.
- 2. Remove two screws (+PWH3×6) to remove the POWER CASE ASSY in the direction of arrow.

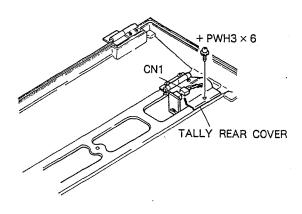


- 3. Remove two screws (+PWH3×6) to remove the CASE.
- 4. Remove the four screws (+PWH3×6) to remove the PS-192 board.

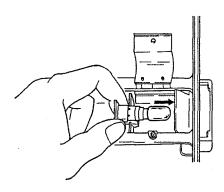


3-6. REPLACEMENT OF TALLY LAMP

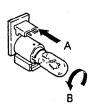
- 1. Open the side panel, on which the tally lamp to be replaced is mounted.
- 2. Remove the screw (+PS3×6) and open the TALLY REAR COVER. Disconnect the connector CN1 on the CN-451 board.



3. Slide the tally lamp socket in the direction of the arrow.



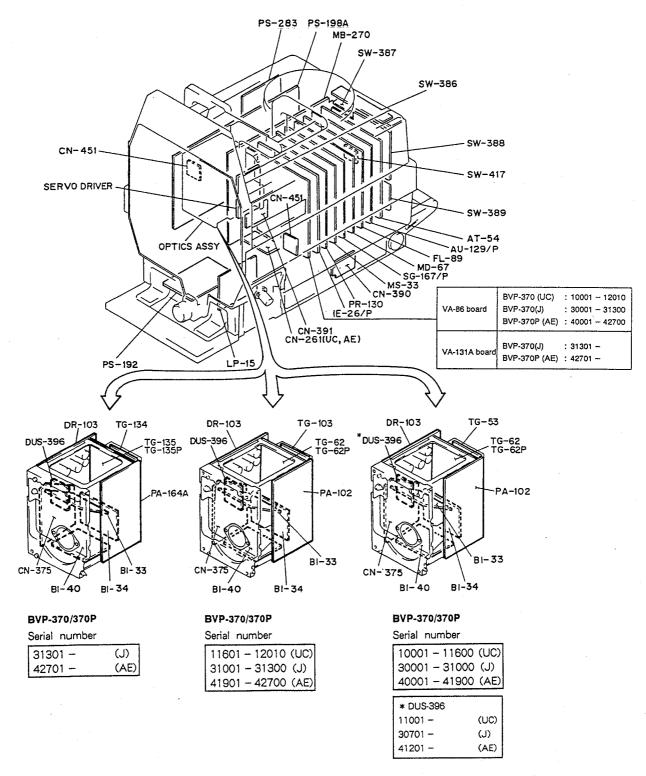
4. To remove the tally lamp, turn it in the direction of arrow B while pushing it in the direction of arrow A. Replace it with a new one.

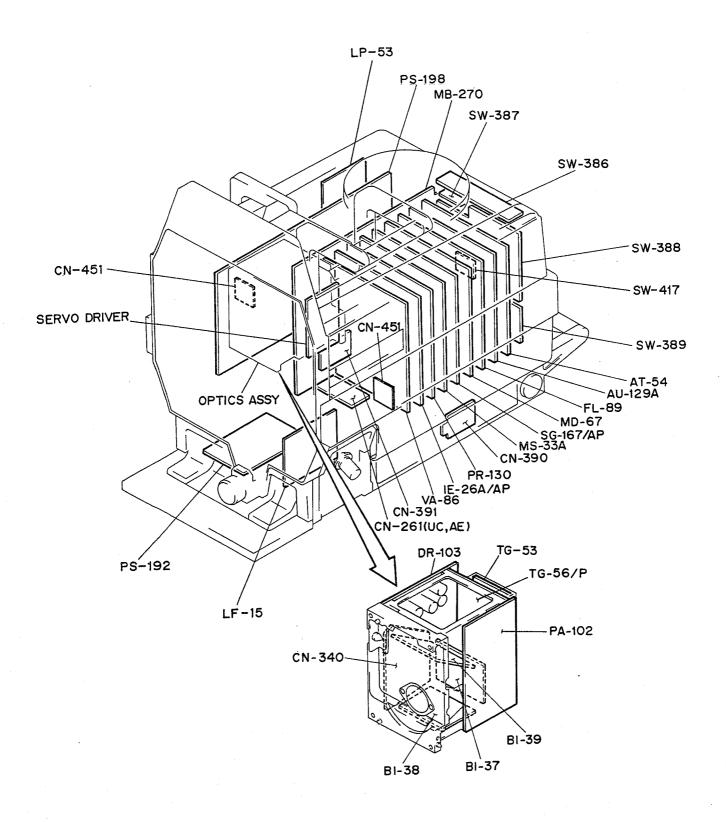


SECTION 4 SERVICE INFORMATION

4-1. BOARD LAYOUT

BVP-370/370P





4-2. CIRCUIT DESCRIPTION

The BVP-370/370P/270/270P electric circuit consists of the followings.

- POWER SUPPLY SYSTEM
- SYNC SIGNAL SYSTEM
- CCD BLOCK SYSTEM
- VIDEO SIGNAL SYSTEM
- AUTO CONTROL SYSTEM
- AUDIO MODULATION/DEMODULATION SYSTEM
- VIEWFINDER SYSTEM

[POWER SUPPLY SYSTEM]

AC 240V voltage from the CCU is output from the filter on the LF-15 board and is supplied to the PS-192 and PS-198 boards. The PS-192 and PS-198 boards generate DC voltage necessary to operate the camera from AC240V voltage and supply the DC voltage to each board.

[SYNC SIGNAL SYSTEM]

The SG-167/167P/167AP board contains the SYNC signal generator and timing pulse generator. Various SYNC signals and timing pulse are generated, based on the H CONT signal from the CCU and the V RESET pulse, which is generated by being decoded serial data from the CCU by the AT-54 board.

[CCD BLOCK SYSTEM]

MODEL	CCD BLOCK COMBINATION TABLE
	TG-53, TG-56/56P, PA-102
BVP-270/270P	DR-103, BI-37/38/39, CN-340
T. (D. 070D	TG-53, TG-62/62P, PA-102
BVP-370/370P	DR-103, BI-33/34/40, CN-375
T) (D eTe (070D	TG-103, TG-56/56P, PA-102
BVP-270/270P	DR-103, BI-37/38/39, CN-340
	TG-103, TG-62/62P, PA-102
BVP-370/370P	DR-103, Bl-33/34/40, CN-375

The TG-53/103 board and TG-62/62P (; BVP-370/P, TG-56/56P; BVP-270/P) board generate timing pulses for CCD driving and a sample-hold pulse for CCD output signal sampling, based on the SYNC signal from the SG board and output them to the DR-103 and the PA-102 board.

The DR-103 board converts the timing pulse from the TG-53/103 and TG-62/62P (; BVP-370/P, TG-56/56P; BVP-270/P) boards into the driving clock pulse, which can directly control the CCD. The DR-103 board also generates V SUB voltage for the CCD and supplies it to the BI-33, BI-34 and BI-40 (; BVP-370/P, BI-37, 38, 39; BVP-270/P) board via the CN-375 (; BVP-370/P, CN-340; BVP-270/P) board.

The CCD for B-ch, G-ch and R-ch is mounted on the Bl boards respectively, where the driving clock pulse and the V SUB voltage from the DR-103 board are added to the CCD via the CN-375 (BVP-370/P)/340 (BVP-270/P) board. The CCD output signals for each channel are output to the PA-102 board.

The PA-102 board samples and holds the CCD output signals using the sample-hold pulse which is sent from the TG-53/103 and TG-62/62P (; BVP-370/P, TG-56/56P; BVP-270/P) boards to get the video signal. The PA-102 board feeds the video signal to the VA-86/131A board.

MODEL	CCD BLOCK COMBINATION TABLE
BVP-370P	TG-134, TG-135/135P, PA-164A
	DR-103, BI-33/34/40, CN-375

The TG-134 board and TG-135/135P (; BVP-370/P) board generate timing pulses for CCD driving and a sample-hold pulse for CCD output signal sampling, based on the SYNC signal from the SG board and output them to the DR-103 and the PA-164A board.

The DR-103 board converts the timing pulse from the TG-134 and TG-135/135P (; BVP-370/P) boards into the driving clock pulse, which can directly control the CCD. The DR-103 board also generates V SUB voltage for the CCD and supplies it to the BI-33, BI-34 and BI-40 (; BVP-370/P) board via the CN-375 (; BVP-370/P) board.

The CCD for B-ch, G-ch and R-ch is mounted on the BI boards respectively, where the driving clock pulse and the V SUB voltage from the DR-103 board are added to the CCD via the CN-375 (BVP-370/P) board. The CCD output signals for each channel are output to the PA-102 board.

The PA-102 board samples and holds the CCD output signals using the sample-hold pulse which is sent from the TG-134 and TG-135/135P (; BVP-370/P) boards to get the video signal. The PA-164A board feeds the video signal to the VA-131A board.

[VIDEO SIGNAL SYSTEM]

•	<u>-</u>
VA-86 board	BVP-370 (UC) : 10001 - 12010 BVP-370P (AE) : 40001 - 42700
VA-131A board	BVP-370P (AE) : 42701 -

The R-ch, G-ch and B-ch video signals are supplied from the CCD to the VA-86/131A board, on which the following processings are performed. After that the video signals are sent to the IE-26/26A/26P/26AP board.

- Switching the video amplifier gain with the GAIN switch.
- BLKG cleaning
- Gain control
- White/Black shading correction
- · Flare compensation
- PRE KNEE correction
- PRE WHITE CUP

The IE-26/26A/26P/26AP board generates the detail signal from the G-ch and R-ch video signals and sends it to the PR-130 board. The masking processing is also performed on the IE board, that is, a few primary color signals are added to the R-ch, B-ch and G-ch video signals to compensate the color reproducibility for the CCD, by setting the MATRIX button on the MSU control panel to ON.

The R-ch, G-ch and B-ch video signals are then sent to the PR-130 board, where the following processings are performed. The PR-130 board sends the processed video signals to the SG-167/167P/167AP board.

- Addition of detail signal
- Pedestal control
- BLKG cleaning
- KNEE correction
- GAMMA correction
- WHITE/BLACK CLIP

The R-ch, G-ch and B-ch video signals sent from the PR-130 board are input to the Y, R-Y and B-Y matrix circuits respectively on the SG board. The mixed ratio of the R-ch, B-ch and G-ch video signals to obtain the Y, R-Y and B-Y signals on the matrix circuit is as follows.

Y =0.30R+0.59G+0.11B

R-Y = 0.70R - 0.59G - 0.11B

B-Y = -0.30R - 0.59G + 0.89B

The Y, R-Y and B-Y signals from the matrix circuit are sent to the MD-67 board and are modulated as follows.

Y →18 MHz amplitude modulation (DSB) → Y RF

R-Y → 36 MHz amplitude modulation (DSB) → R-Y RF

B-Y \rightarrow 36 MHz amplitude modulation (DSB) \rightarrow B-Y RF

The R-Y RF signal, which is modulated by the carrier phase-shifted by 90 degrees against the carrier of the B-Y RF signal, is mixed with the B-Y RF signal. Mixed signal is sent to the FL-89 board as a CHROMA RF signal together with the Y RF signal.

The FL-89 board contains a multiplex filter, which unites or separates the Y RF and CHROMA RF signal from the MD-67 board, the AUDIO RF signal going in and out the AU-129/129P/129A board and the RET RF signal which is

sent to the MS-33/33A board after being demodulated by the FL-89 board. The above-mentioned Y RF and CHROMA RF signals are fed to the CCU via the filter on the LF-15 board.

[AUTO CONTROL SYSTEM]

Using the microprocessor, the AT-54 board automatically controls the auto-white balancing, auto-black balancing, gain control, pedestal control, KNEE control and gamma control and so on, based on a serial data from the CCU. The AT-54 board also generates a character signal to display the camera condition on the viewfinder screen based on the diagnosis signals for each board sent from the SG board and variable condition signals such as the IRIS POSI signal.

[AUDIO MODULATION/DEMODULATION SIGNAL]

The AU-129/129P/129A board divides the AUDIO RF signal sent from the CCU through the multiplex filter on the FL-89 board into six and demodulates the following signals respectively.

INCOM 1 and INCOM 2 signals PGM 1 and PGM 2 signals CCU DATA (Serial data) H CONT signal

Demodulated INCOM 1, INCOM 2, PGM 1 and PGM 2 signals are sent to the INCOM/PGM connector on the camera rear panel, demodulated CCU DATA is sent to the interface CPU on the AT-54 board and demodulated H CONT signal is sent to the SYNC generator on the SG board

CHU DATA from the sub-CPU on the AT-54 board, the INCOM 1/INCOM 2 signal from the INCOM/PGM connector on the camera rear panel and the MIC 1/MIC 2 signal from the MIC connector on the camera side are respectively FM-modulated and multiplexed. And they are supplied to the CCU as the AUDIO RF signal via the multiplex filter on the FL-89 board and the filter on the LF-15 board.

[VIEWFINDER SYSTEM]

The R-ch, G-ch and B-ch video signals from the PR-130 board and the RET signal from the FL-89 board are input to the MS-33/33A board. The signal input is set to ON or OFF with the select button on the camera rear panel.

The cursor signal and ZOOM IND signal generated by the MS-33/33A board and the character signal from the AT-54 board are added to the above signals and sent to the viewfinder and the MONITOR OUT connector on the camera side panel.

4-3. NOTE ON MAINTENANCE SERVICE

4-3-1. CCD Unit Replacement

Keep the CCD unit apart from electrostatic materials, because the CCD unit is sometimes broken by a static electricity.

If the GCD unit is broken, the whole CCD unit must be replaced.

4-3-2. PS-198 Board Power Voltage Error Detection Circuit

The PS-198 board contains the circuit which detects the power voltage error. If the error is detected, this circuit stops the power supply. In this case, turn off the power once. After you settle that trouble, turn on the power.

4-3-3. Note On Extracting Board

To avoid the trouble of PC boards, when checking or adjusting the camera, be sure to turn off the power before extracting boards.

4-3-4. Note On Replacement Parts

(1) Safety Related Components Warning Components identified by shading marked and Amarked on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony Parts whose part numbers appear as shown in this manual or in Service bulletins and service manual supplement published by Sony.

(2) Standardization of Parts

Repair parts supplied from Sony Parts Center may not be always identical with the part which actually in use due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts". This manual's exploded views and electrical spare parts list are indicating the parts number of "the standardization genuine parts at present".

(3) Stocked Parts

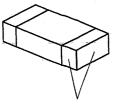
The parts marked with "S" in the SP column of the exploded views and electrical spare parts list are normally required for routine service work. Order for parts marked with "O" will be processed, but allow for additional delivery time.

(4) Units of Capacitors, Inductors, and Resistors
The following units are omitted in the schematic diagrams, exploded views, and electrical parts lists unless otherwise specified;

 $\begin{array}{lll} \text{Capacitor} & : & \mu F \\ \text{Inductor} & : & \mu H \\ \text{Resistor} & : & \Omega \end{array}$

4-3-5. Replacement of Chip Parts

Capacitor



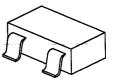
Covered with electrode.

Resistor

Black
(resistance side)

Not covered with electrode.

Diode and transistor



Tools required

- Soldering iron of approx. 20W(Use a temperature controller, if possible, which can control the iron temperature to 270 ± 10 °C.)
- Desoldering metal braid(Parts No. 7-641-300-81)
- Solder(A solder of 0.6mm in diameter is recommended.)
- Tweezers

Soldering conditions

- Iron temperature of 270 \pm 10 $^{\circ}\mathrm{C}$
- Soldering should be performed within two seconds.

Procedures

- 1. To remove a resistor or capacitor, place the tip of a soldering iron on chip parts to heat the parts, and then move it horizontally for removal while being desoldered. For removal of a diode or transistor, heat the one side, with two pins, of chip parts at the same time. Set the parts up when desoldered and remove two pins. And then remove the pin on another side.
- 2. Absorb solder by using a desoldering metal braid to smooth the land surface after removal.
- Confirm by visual check that no trace is come off, no adjacent parts is damaged and no bridging occur.
- 4. Perform a thin pretinning on the trace.
- Place new chip parts on the trace to solder its both sides.

Note: Do not reuse parts which have been removed.

For details, see "CHIP COMPONENTS manual" (Parts No. 9-963-089-01) prepared by Sony Corporation.

4-3-6. PROM IC

Each PROM IC no the PC board has a suffix to its original designation, which is shown in bold-face type in the following table. This suffix may change according to improvement of IC. Never use an IC having no suffix to its original designation, because its memory has not been programmed.

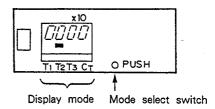
BOARD	REF. NO.	IC NAME
AT-54C	IC18	27C512G-20-P370WND
	IC30	27C256-BVP370V3.00
	IC33	μ PD28C64C
MS-33/33A	IC15	27C512G-20-370 CURSOR
	IC30	27C512G-370 MONISEL2

4-3-7. Digital Hour Meter

The digital hour meter (TM1) is mounted on the LP-53 board. The hour meter has four display modes of T1, T2, T3 and CT and the OPERATION METER mode T1 is now used.

This mode displays accumulated elapsed operation time that the power of the unit has been turned on.

The actual operation time is equal to the displayed value multiplied by 10.



It is recommended to perform the periodic check and maintenance based on the hour meter.

Note: The hour meter has a built-in battery which should be replaced every five years. (Sony Parts No. 1-548-152-11)

4-3-8. Note on Replacement of CCD unit

When replacing the CCD unit with that having the following block number, make sure that a version of IC30 of AT-54C board is V3.00 or higher version. If not, it is necessary to replace the IC30 of the AT-54C board.

As for its part number, see Section D
"SPARE PARTS"
[Applicable Block Number]
EKA XXXXX

ELAXXXXX

4-4. WARNING MESSAGES

When a warning message is displayed on the viewfinder, take the following action.

① "NO CCU DATA"

This message is displayed when serial data sent from the CCU is not being received. In this situation, the camera connot be contorolled with the CCU.

Check the signal transmission circuits and the interface circuits.

This message may be displayed when a single unit of the camera (without the CCU) is used after it was used with the CCU. In this case, however, there is no problem with the operation of the camera.

② "FRAMING ERR" or "PARITY ERR"

This message is displayed when an error is detected in serial data sent from the CCU.

Check the signal transmission circuits and the interface circuits.

4-5. ERROR MESSAGES IN AUTOMATIC ADJUSTMENT MODE

When an error message is displayed on the viewfinder in automatic adjustment mode, take the following action.

"ERROR"

This message is displayed when there is an error which adversely affects the adjustment. The automatic adjustment stops when the message is displayed and the compensation value returns to the value set immediately before adjustment. Take appropriate action by referring to the message (① to ⑨ below) displayed at that time.

"CAUTION"

This message is displayed when the compensation value is close to the limit of the compensation range. Adjust the PC board as soon as possible.

① "OVER FLOW"

This message is diplayed when the compensation value exceeds the limit of the compensation range. Check the setting of the camera. If the setting is correct, the PC board must be ajdusted.

② "LOW LEVEL"

This message is displayed when the video signal level is too low to be adjusted during the white balance adjusment. Raise the video signal level by increasing the illumination intensity, opening the lens iris, or increasing the gain so that it can be adjusted.

③ "TIME LIMIT"

This message is displayed when automatic adjustment can not be completed within the specified time. Check the setting of the camera. If the setting is correct, the PC board must be adjusted.

(4) "NOT OPENED"

This message is displayed when the lens iris is not opened during the white balance adjustment. Check the lens and ND filter.

Other Messages

• "BREAK"

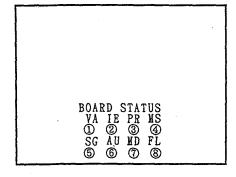
This message is displayed \cdot when the automatic adjustment is interrupted by the BREAK command.

4-6. SELF-DIAGNOSIS

The BVP-370/370P/270/270P is provided with the self-diagnostic function which displays a faulty PC board on the viewfinder.

The details of diagnosis for each board are as follows.

By setting the DISPLAY switch on the rear panel, the statuses of internal circuit boards determined by self-diagnosis can be displayed. For details, see Section 1-6 Viewfinder screen indications.



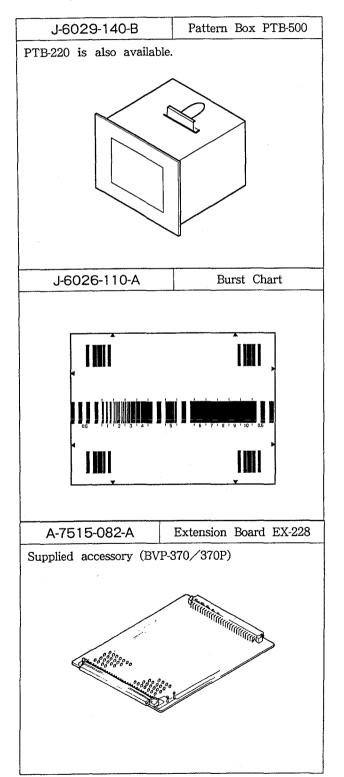
- ① VA board ② IE board ③ PR board ④ MS board Self-diagnosis operates on the condition that the levels of the R, G and B video signals from each board exceed the standard level.
- MD board Self-diagnosis operates on the condition that the level of the RF signal from the video signal transmission circuit exceeds the standard level.

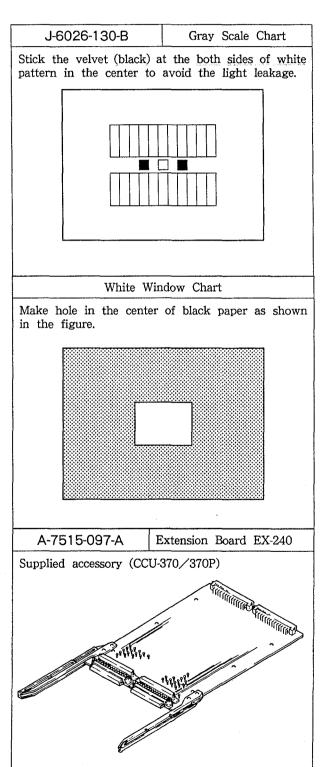
İ 1

SECTION 5 ALIGNMENT

5-1. PREPARATION

5-1-1. Equipment Required





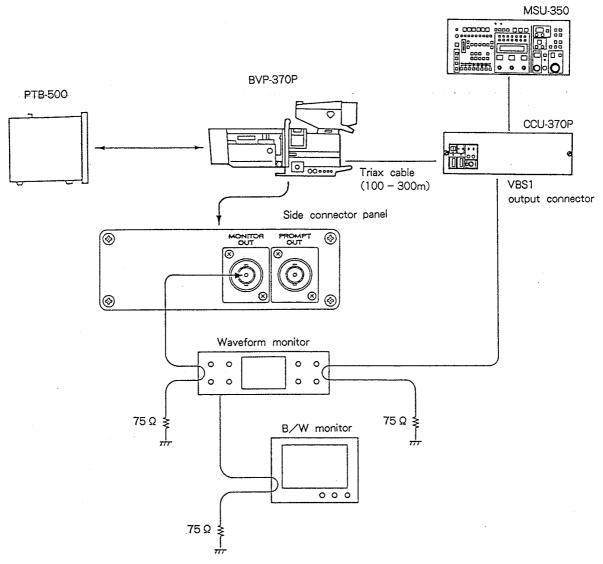
Measuring Equipment

Digital voltmeter
Oscilloscope (150 MHz or more)
Waveform monitor
B/W monitor
(Horizontal resolution: more than 700 TV lines)
Audio generator
Frequency counter
Spectrum analyzer
DC power supply (0 to 5 Vdc, continuously variable)

Peripheral Equipment

Camera control unit CCU-370P Master setup unit MSU-350

5-1-2. Connection



Note: This alignment is written on the premise that the MSU-350 is used. Therefore, the condition of switch setting, and so on, are for the MSU-350.

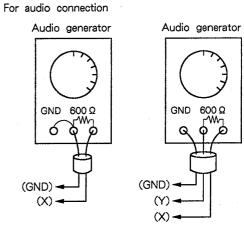


Fig. 1

Fig. 2

5-1-3. Initial Setting

BVP-370P

1. Initial setting of each switch

51. 0.0.	
[VA-86/131A board] S1 (FLARE ········for VA-86 board) S701 (FLARE ·······for VA-131A board)	"ON" "ON"
[IE-26P board] S1 (SKIN SET) S2 (DTL ON/OFF)	"NORM" "ON"
[PR-130 board] S1 (GAMMA)	"ON"
[MS-33 board] S1 (SAFETY ZONE) S7 (MONITOR SELECT)	"90%" "VF"
[SG-167P board] S1 (R ON/OFF) S2 (G ON/OFF)	"ON" "ON"
[AT-54 board] S1 (MODE)	"F"
[AU-129P board] S1 (PGM 1 MIX) S2 (PGM 2 MIX) S3 (TRK PGM) S4 (TRK INCOM 2) S10 (MIC POWER)	"OFF" "ON" "OFF"
[Rear panel] CURSOR button Video signal select button RET 1 button RET 2 button FILTER LOCAL button ND filter select button CC filter select button CENTER MARKER switch SAFETY ZONE switch MIX VF switch DISPLAY switch	"OFF" "G" "OFF" (light up)" "1" "B" "OFF" "OFF" "OFF"

MSU-350

SIGNAL SELECT BLOCK	
PANEL ACTIVE button	"ON (light up)"
CAM POWER button	"ON (light up)"
TEST 1 button	"OFF (lamp goes off)"
TEST 2 button	"OFF (lamp goes off)"
BARS button	"OFF (lamp goes off)"
CLOSE button	"OFF (lamp goes off)"
MODE SELECT BLOCK	
DETAIL OFF button	"OFF (light up)"
	PANEL ACTIVE button CAM POWER button TEST 1 button TEST 2 button BARS button CLOSE button MODE SELECT BLOCK

- MODE SELECT BLOCK
 DETAIL OFF button
 KNEE OFF button
 AUTO KNEE button
 MATRIX button
 MATRIX button
 MODE SELECT BLOCK
 "OFF (light up)"
 "OFF (light up)"
 "OFF (lamp goes off)"
- AUTO SETUP BLOCK
 LEVEL button "OFF (lamp goes off)"
 WHITE button "OFF (lamp goes off)"
 BLACK button "OFF (lamp goes off)"

2. Presetting of compensation signal

- Preset (center value) all compensation signals output from the microprocessor before starting the adjustments.
 - If not, the adjustments will not be set correctly even if the specifications are satisfied.
- 1. Confirm that the OFFSET button on the MSU-350 is set to OFF (lamp goes off).
- 2. S1 MODE switch/AT-54 board → "0"
 S2 SINGLE/UP ↔ DOWN switch/AT-54 board
 → Set to upperside (SINGLE/UP ↔ DOWN) once.
- Adjust the MASTER BLACK knob and set the adjustment value that is displayed on the display block to "0".

5-1-4. Note on adjustment

When performing the adjustment, read the following comments.

- 1. All measuring equipments must be calibrated. Also the adjustment of Camera Control Unit CCU-370P must be completed.
- 2. "5-1-3. Initial setting" should be done before the adjustment.
- 3. "5-2. ADJUSTMENT ITEMS" is for overall adjustment procedures.
- 4. Flowcharts in "5-4. PARTIAL ADJUSTMENT" show the adjustment in order to perform the partial adjustment.
- 5. When adjusting the following controls, an option (SKIN DETAIL) must be set on the MSU-350.

Function of each controls

Hue of skin, brightness of skin and the level of skin detail can be set above controls,

Instant adjustment

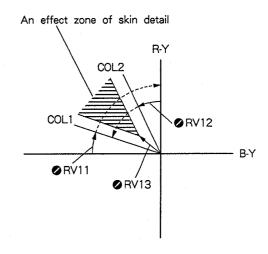
Shooting object: Shoot human face to be shot for adjustment before starting actual shooting.

Switch setting

SKIN DTL/MSU-350 → "ON" (option) S1 (SKIN SET)/IE-26P board → "SET"

- An effect zone of skin detail in option (SKIN DETAIL) can be obtained by adjusting RV11 (COL 1 axis), ♠ RV12(COL 2 axis), and ♠ RV13 (SATURATION).
- · White gate signal appears on effect zone of skin detail. And then, adjust ORV11, ORV12, and RV13 observing a color monitor.
- Adjust the level of skin detail by using RV32.

- 6. When adjusting OLV1 and OLV2 on the FL-89 board, long TRIAX cable (600 to 1000 m) is required. Therefore, perform the adjustment only when replacing (Refer to "7-12. Return Video Frequency Adjustment (1)" and "7-13. Return Video Frequency Adjustment (2).")
- 7. TALLY LAMP INTENSITY ADJUSTMENT (RV9/ MS-33 board) Usually, tally lamp intensity adjustment is not required. However, when desiring it, adjust PV9 to your preferred intensity.



5-2. ADJUSTMENT ITEMS

STEP 1. POWER SUPPLY SYSTEM ADJUSTMENT

1-1. PS-198 Board Power Supply System Adjustment

STEP 2. SYNC SIGNAL SYSTEM ADJUSTMENT

2-1. SG-167P Board +5V Adjustment

STEP 3. VIDEO SIGNAL SYSTEM ADJUSTMENT

- 3-1. VA-86/131A Board +5V Adjustment
- 3-2. IE-26P Board +5V Adjustment
- 3-3. PR-130 Board +5V Adjustment
- 3-4. Pedestal Pre-adjustment
- 3-5. Input DC Balance Adjustment
- 3-6. VA Gain Adjustment
- 3-7. Black Shading Pre-adjustment
- 3-8. White Shading Pre-adjustment
- 3-9. Black Set Adjustment
- 3-10. Offset Adjustment
- 3-11. V MOD Balance Adjustment
- 3-12. Test Signal Adjustment
- 3-13. Pre Knee Adjustment
- 3-14. Pedestal Adjustment
- 3-15. B-CH Out Level Adjustment
- 3-16. G-CH Out Level Adjustment
- 3-17. R-CH Out Level Adjustment
- 3-18. PR Gain Adjustment
- 3-19. Black Shading Adjustment
- 3-20. White Shading Adjustment
- 3-21. Flare Adjustment
- 3-22. Gamma Balance Adjustment
- 3-23. Gamma Correction Adjustment
- 3-24. Knee Correction Adjustment
- 3-25. White Clip Adjustment

STEP4. DETAIL SIGNAL SYSTEM ADJUSTMENT

- 4-1. IE-26P Board +5V Confirmation
- 4-2. V DTL Null Adjustment
- 4-3. IE Frequency Response Adjustment
- 4-4. G-CH 1H Phase Adjustment
- 4-4. G-CH 1H/2H Phase Adjustment
- 4-5. R-CH 1H Phase Adjustment
- 4-7. R-CH 1H/2H Phase Adjustment
- 4-8. H DTL Balance Adjustment
- 4-9. HF/LF DTL Balance Adjustment
- 4-10. DC Offset Adjustment
- 4-11. Level Dependent Adjustment
- 4-12. Crispning Adjustment
- 4-13. DTL Limiter Adjustment
- 4-14. H/V Ratio Adjustment
- 4-15. DTL Gain Adjustment

STEP 5. AUTO CONTROL SYSTEM ADJUSTMENT

- 5-1. AT-54 Board +5V Adjustment
- 5-2. Auto Iris Adjustment
- 5-3. Character Position Adjustment
- 5-4. Window Gate Adjustment
- 5-5. CC Filter Servo Adjustment
- 5-6. ND Filter Servo Adjustment

STEP 6. VF INTERFACE SYSTEM ADJUSTMENT

- 6-1. MS-33 Board +5V Adjustment
- 6-2. Safety Zone Adjustment
- 6-3. Center Marker H Position Adjustment
- 6-4. Cursor Adjustment
- 6-5. VF R/G/B Level Adjustment
- 6-6. Return Video Level Adjustment

STEP 7. TRIAX INTERFACE SYSTEM ADJUSTMENT

- 7-1. MD-67 Board +5V Adjustment
- 7-2. FL-89 Board +9V Adjustment
- 7-3. 36 MHz Frequency Adjustment
- 7-4. Y REF Level Adjustment
- 7-5. Y Carrier Balance Adjustment
- 7-6. Y DC Balance Adjustment
- 7-7. R-Y Ref Level Adjustment
- 7-8. B-Y Ref Level Adjustment
- 7-9. R-Y/B-Y DC Balance Adjustment
- 7-10. R-Y/B-Y 90° Adjustment
- 7-11. 72 MHz TRAP Adjustment
- 7-12. Return Video Frequency Adjustment (1)
- 7-13. Return Video Frequency Adjustment (2)
- 7-14. Return Video Level Adjustment
- 7-15. RET DC Set Adjustment

STEP 8. INTERCOM SYSTEM ADJUSTMENT

- 8-1. AU-129P Board +9V Adjustment
- 8-2. Tuning Adjustment
- 8-3. Frequency Setting Adjustment
- 8-4. INCOM 1 Deviation Adjustment
- 8-5. INCOM 2 Deviation Adjustment
- 8-6. MIC 1 Deviation Adjustment
- 8-7. MIC 2 Deviation Adjustment
- 8-8. INCOM 1 Side Tone Adjustment
- 8-9. INCOM 1 Demod. Adjustment
- 8-10. INCOM 1 Level Adjustment
- 8-11. INCOM 2 Side Tone Adjustment
- 8-12. INCOM 2 Demod. Adjustment
- 8-13. INCOM 2 Level Adjustment
- 8-14. PGM Demod. Adjustment
- 8-15. PGM Level Adjustment

POWER SUPPLY SYSTEM ADJUSTMENT STEP 1.

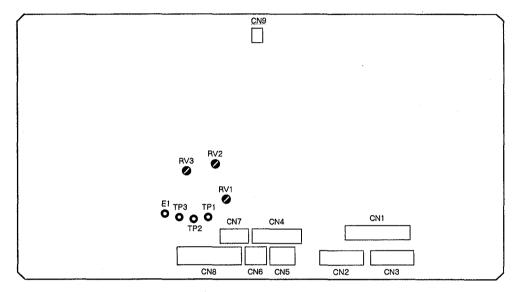
1-1. PS-198 BOARD POWER SUPPLY SYSTEM ADJUSTMENT

Note: Perform the adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Equipment:

Digital voltmeter

To be extended: PS-198 board



PS-198 BOARD (COMPONENT SIDE)

Adjustment Procedures

• Perform the adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Adj. Item	Test Point /PS-198 Board	Adj. Point /PS-198 Board	Specifications
+9.5V	TP1(GND;E1)	ØRV1	+9.5 ± 0.02Vdc
+5.5V	TP2(GND;E1)	ØRV2	+5.5 ± 0.02Vdc
+5.0V	TP3(GND;E1)	ØRV3	$+5.0\pm0.02$ Vdc

STEP 2. SYNC SIGNAL SYSTEM ADJUSTMENT

2-1. SG-167P BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the SG-167P board.

Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Equipment:

Digital voltmeter

To be extended:

SG-167P board

Test point:

TP7 (GND; E1)/SG-167P board

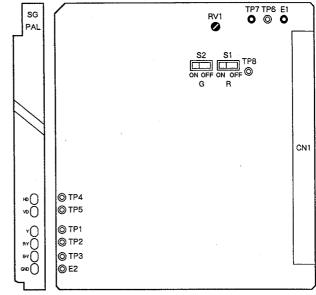
Adjusting point:

Specification:

 $+5.0 \pm 0.02 \, \mathrm{Vdc}$

Adjustment Procedures

 Perform adjustment when measured voltage is more than ± 1% with respect to the specified voltage.



(PANEL SIDE) SG-167P BOARD (COMPONENT SIDE)

STEP 3. VIDEO SIGNAL SYSTEM ADJUSTMENT

3-1. VA-86/131A BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the VA-86/131A board.

Therefore, when this adjustment is carried out, all of following adjustments in VIDEO SIGNAL SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Serial No. 40001 to 42700

Equipment: Digital voltmeter
To be extended: VA-86 board

Test point: TP2 (GND; E1)/VA-86 board

Adjusting point:
◆ RV1/VA-86 board
Specification: +5.0 ± 0.02 Vdc

Adjustment Procedures

 Perform adjustment when measured voltage is more than ± 1% with respect to the specified voltage.

Serial No. 42701 and higher

Equipment: Digital voltmeter
To be extended: VA-131A board

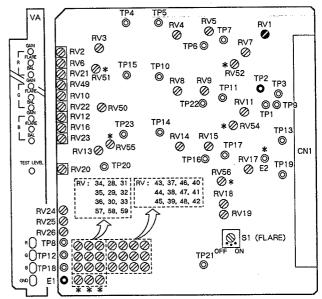
Test point: TP701 (GND; E702)/VA-131A board

Adjusting point: RV701/VA-131A board

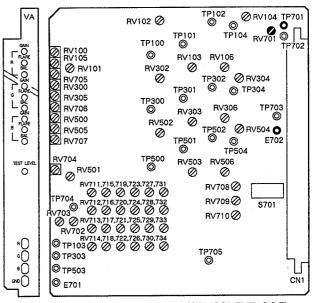
Specification: +5.0 ± 0.02 Vdc

Adjustment Procedures

 Perform adjustment only when measured voltage is more than ± 1% with respect to the specified voltage.



(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

IE-26P BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the IE-26P board.

Therefore, when this adjustment is carried out, all of following adjustments in VIDEO SIGNAL SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Equipment:

Digital voltmeter

To be extended:

IE-26P board

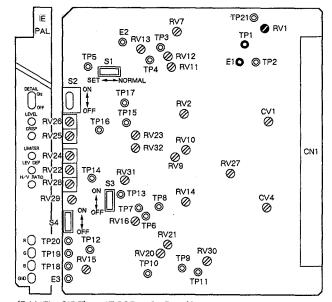
Test point: Adjusting point: TP1 (GND; E1)/IE-26P board

Specification:

 $+5.0 \pm 0.02 \, \text{Vdc}$

Adjustment Procedures

• Perform adjustment when measured voltage is more than ± 1% with respect to the specified voltage.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

3-3. PR-130 BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the PR-130 board.

Therefore, when this adjustment is carried out, all of following adjustments in VIDEO SIGNAL SYSTEM

ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Equipment: Digital voltmeter **To be extended:** PR-130 board

Test point: TP2 (GND; E1)/PR-130 board

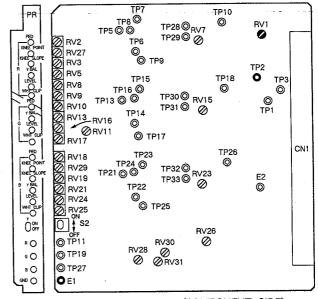
Adjusting point:

RV1/PR-130 board

Specification: +5.0 ± 0.02 Vdc

Adjustment Procedures

 Perform adjustment when measured voltage is more than ± 1% with respect to the specified voltage.



(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

3-4. PEDESTAL PRE-ADJUSTMENT

Equipment:

Waveform monitor

Preparation

CLOSE button/MSU-350 → "ON"

Video signal select button/BVP-370P (rear panel) → "G"

RESPONSE switch/waveform monitor → "LOW PASS"

Test point:

MONITOR OUT connector (camera

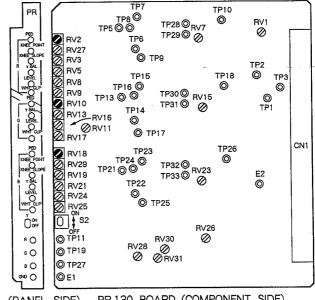
side panel)

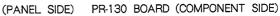
Adjustment Procedures

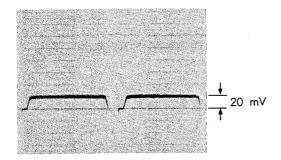
1. Set the adjustment value that is displayed on the display block to "0" with MASTER BLACK control. Make sure that the initial setting are performed so that compensation data for BLK SET, G PED, R PED and B PED are reset.

2. Perform adjustment in order of G, R and B with the video signal select button.

Adj. Point/PR-130		Specification
G-ch		
R-ch	R-ch RV2 (R PED)	
B-ch		









3-5. INPUT DC BALANCE ADJUSTMENT

Equipment:

Oscilloscope

To be extended: VA-86 board

Preparation

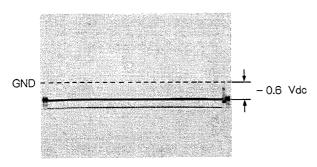
CLOSE button/MSU-350→"ON"

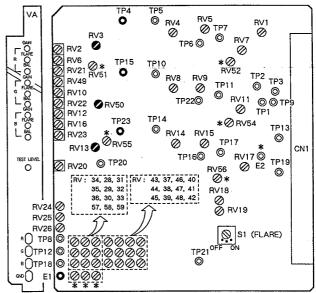
Adjustment Procedures

Adjust controls as follows.

VA-86 board (GND: E1)

	Test Point	Adj. Point	Specification
G-ch	TP15		
R-ch	TP4	ØRV3	_ 0.6 Vdc
B-ch	TP23	ØRV13	7





(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

◆ RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700

3-6. VA GAIN ADJUSTMENT

Note: Use a white pattern chart for this adjustment. Adjust the lighting so that the white area is exactly 3200K of color temperature. Ensure that the chart is lit to 2000 lux and is 89.9% reflectance. When the pattern box is used, well maintained pattern box should be used.

Object:

White window chart

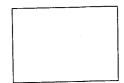
Equipment:

Oscilloscope

To be extended:

VA-86/131A board

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so

that the white portion of the white window chart fully occupies the monitor

screen.

Lens iris:

Set the IRIS control/MSU-350 to F5.6.

(Serial No.: Up to 40300)

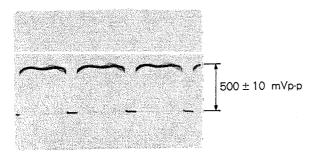
Set the IRIS control/MSU-350 to F8.0 (Serial No.: 40301 and higher)

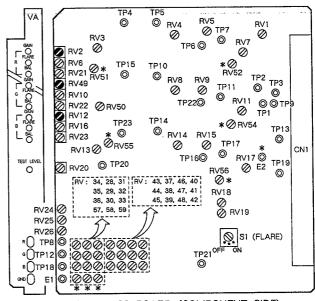
Adjustment Procedures Serial No. 40001 to 42700

	Test Point /Extension board	Adj. point /VA-86 board	Spec.	
G-ch	TPA20 (GND;E1)	ØRV49 (G GAIN)		
R-ch	TPA14 (GND;E1)	ØRV2 (R GAIN)	500 \pm 10 mVp-p	
B-ch	TPA26 (GND;E1)	ØRV12 (B GAIN)		

Serial No. 42701 and higher

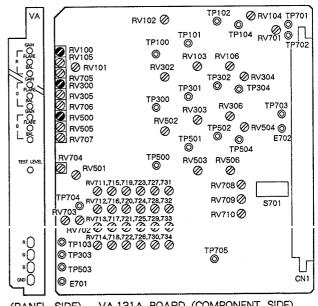
	Test Point /Extension board	Adj. point /VA-131A board	Spec.	
G-ch	TPA20 (GND;E1)			
R-ch	TPA14 (GND;E1)	ØRV100 (R GAIN)	500 ± 10 mVp-p	
B-ch	TPA26 (GND;E1)			





VA-86 BOARD (COMPONENT SIDE)

VA-86 board with a suffix of -12. Suffix -11; Serial No. Up to 40300 Suffix -12; Serial No. 40301 to 42700



VA-131A BOARD (COMPONENT SIDE) (PANEL SIDE)

3-7. BLACK SHADING PRE-ADJUSTMENT

Equipment:

Waveform monitor

To be extended: VA-86/131A board

Preparation

- CLOSE button/MSU-350 → "ON"
- MASTER GAIN select button/MSU-350 → "+9"
- Video Signal Select button/BVP-370P (rear panel) → "G"
- RESPONSE switch/waveform monitor → "LOW PASS"

Test point:

MONITOR OUT connector (camera

side panel)

Adjustment Procedures

 Perform adjustment in order of G, R and B with the video signal select button.

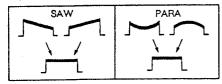
Serial No. 40001 to 42700 (VA-86 board)

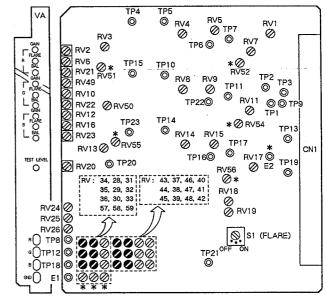
	BLK H SAW	BLK H PARA	BLK V SAW	BLK V PARA
G-ch	Ø RV29			⊘ RV44
R-ch	Ø RV28	⊘ RV34		ØRV43
B-ch	Ø RV30	ØRV36	ØRV39	ØRV45

Serial No. 42701 and higher (VA-131A board)

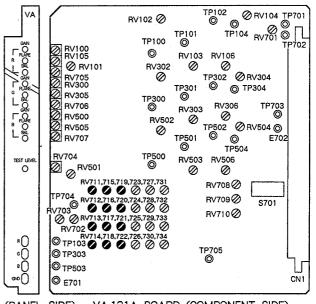
	BLK H SAW	BLK H PARA	BLK V SAW	BLK V PARA
G-ch	@RV715	ØRV716	ØRV717	ØRV718
R-ch	ØRV711	ØRV712	ØRV713	ØRV714
B-ch	ØRV719	ØRV720	ØRV721	ØRV722

Adjust the waveform for flat





(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.

MASTER GAIN select button/MSU-350→"0"

3-8. WHITE SHADING PRE-ADJUSTMENT

Equipment:

Waveform monitor

To be extended:

VA-86/131A board

Preparation

GAMMA SELECT (OFF) button/MSU-350 → light up

Video Signal Select button/BVP-370P (rear panel) → "G"

Object:

White window chart

Lens zoom:

Adjust the zoom control of the lens so that the white portion of the white

window chart fully occupies the monitor

screen.

Lens iris:

Adjust the iris control so that the video level at MONITOR OUT connector

(camera side panel) is 650 ± 10 mV.

Test point:

MONITOR OUT connector (camera

side panel)

Adjustment Procedures

· Perform adjustment in order of G, R and B with the video signal select button.

Serial No. Up to 40300 (VA-86 board)

	WHT H SAW	WHT V SAW	WHT V PARA
G-ch	Ø RV32	ØRV41	Ø RV47
R-ch	Ø RV31	Ø RV40	Ø RV46
B-ch	Ø RV33	ØRV42	Ø RV48

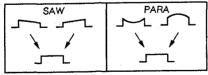
Serial No. 40301 to 42700 (VA-86 board)

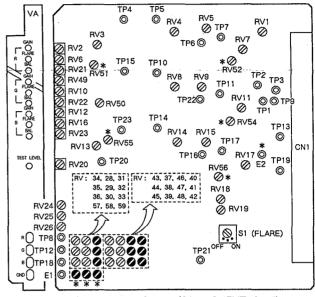
	WHT H SAW	WHT H PARA	WHT V SAW	WHT V PARA
G-ch		⊘ RV58	⊘ RV41	@ RV47
R-ch	ØRV31	Ø RV57	Ø RV40	Ø RV46
B-ch	Ø RV33	Ø RV59		Ø RV48

Serial No. 42701 and higher (VA-131A board)

	WHT H SAW	WHT H PARA	WHT V SAW	WHT V PARA
G-ch	⊘ RV727	⊘ RV728	Ø RV729	ØRV730
R-ch	⊘ RV723	⊘ RV724	Ø RV725	⊘ RV726
B-ch	Ø RV731	⊘ RV732	Ø RV733	Ø RV734

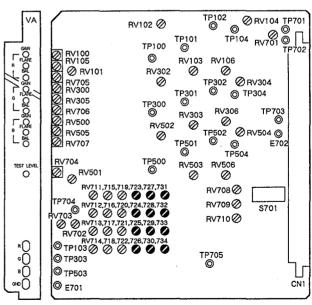
Adjust the waveform for flat





VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12. Suffix -11; Serial No. Up to 40300 Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.

GAMMA SELECT (OFF) button/MSU-350→lamp goes off GAMMA SELECT (0.45) button/MSU-350 → light up

Serial No. 40001 to 42700

3-9. BLACK SET ADJUSTMENT

Equipment:

Waveform monitor

To be extended:

VA-86 board

Preparation

CLOSE button/MSU-350 → "ON"

RESPONSE switch/Waveform monitor → "LOW PASS"

Test point: MON

MONITOR OUT connector (camera side panel)

Adjustment Procedures

 Adjust the MASTER BLACK control/MSU-350 so that the black level at test point is 140 mV.

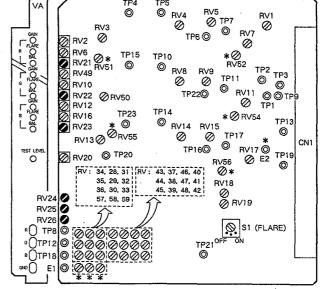
2. Perform adjustment in order of G, R and B with video signal select button.

	Video Signal Select Button	Adj. Point /VA-86 Board	MASTER GAIN Select Button
0.1	"G"	⊘ RV22	0(0dB) ↔ 9(+9dB)
G-ch	G	⊘ RV25	0(0dB) ↔ 18(+18dB)
Dak	"B"	Ø RV21	0(0dB) ↔ 9(+9dB)
R-ch	n	⊘ RV24	0(0dB) ↔ 18(+18dB)
D als	"B"	⊘ RV23	0(0dB) ↔ 9(+9dB)
B-ch	Б		0(0dB) ↔ 18(+18dB)



Adjust the controls so that the black level does not change even when the MASTER GAIN select button is switched according to the above table.

A = B = C

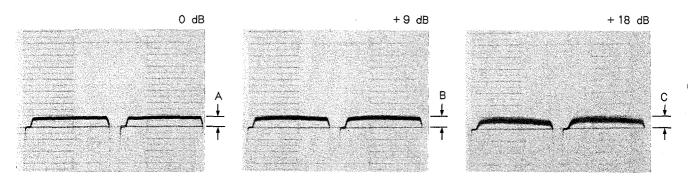


(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the
 VA-86 board with a suffix of −12.

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700



Set adjustment value that is displayed on the display block to "0" with MASTER BLACK control/MSU-350.

Note: After the adjustment, set button as follows.

MASTER GAIN select button → "0 (0 dB)"



3-9. BLACK SET ADJUSTMENT

Equipment:

Waveform monitor

To be extended: VA-131A board

Preparation

CLOSE button/MSU-350 → "ON"

RESPONSE switch/Waveform monitor → "LOW PASS"

Test point:

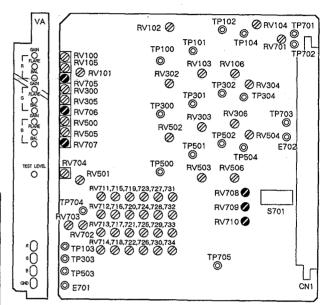
MONITOR OUT connector (camera

side panel)

Adjustment Procedures

- Adjust the MASTER BLACK control/MSU-350 so that the black level at test point is 140 mV.
- 2. Perform adjustment in order of G, R and B with video signal select button.

	Video Signal Select Button	Adj. Point /VA-131A Board	MASTER GAIN Select Button
C ah	"G"	⊘ RV706	0(0dB) ↔ 9(+9dB)
G-ch	G	Ø RV709	0(0dB) ↔
Б	"B"	⊘ RV705	0(0dB) ↔ 9(+9dB)
R-ch	п	⊘ RV708	0(0dB) ↔
B-ch	"B"	ØRV707	0(0dB) ↔ 9(+9dB)
		ØRV710	0(0dB) ↔



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Specifications:

Adjust the controls so that the black level does not change even when the MASTER GAIN select button is switched according to the above table.

$$A = B = C$$

0 dB

+9 dB

+ 18 dB



3. Set adjustment value that is displayed on the display block to "0" with MASTER BLACK control/MSU-350.

Note: After the adjustment, set button as follows.

MASTER GAIN select button → "0 (0 dB)"

5-17 (b)

3-10. OFFSET ADJUSTMENT

Equipment:

Waveform monitor

To be extended:

VA-86/131A board

Preparation

CLOSE button/MSU-350 → "ON"

WHITE button (control item select button)/MSU-350

MASTER GAIN select button/MSU-350 → "0"

Set the Waveform monitor as follows.

DISPLAY mode : "2 F

: "2 FIELD"(V period)

VOLTS FULL SCALE mode : "0.2"

Test point:

MONITOR OUT connector

(camera side panel)

Adjusting point

Serial No. 40001 to 42700

	Adj. point/VA-86 board (GND;E1)	
G-ch	ØRV8	
R-ch	ØRV4	
B-ch	⊘ RV14	

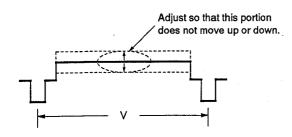
Serial No. 42701 and higher

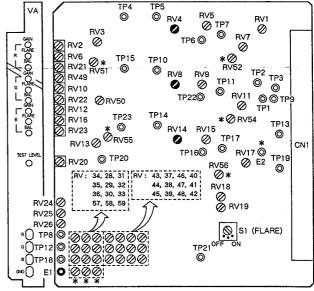
	Adj. point/VA-131A board
G-ch	⊘ RV302
R-ch	⊘ RV102
B-ch	⊘ RV502

Adjustment Procedures

- 1. Video signal select button/BVP-370P (rear panel) → "G"
- Adjust the following RV control so that the center portion of level of V period does not move up or down when turning the control knob on the MSU-350 to fully clockwise or fully counterclockwise.

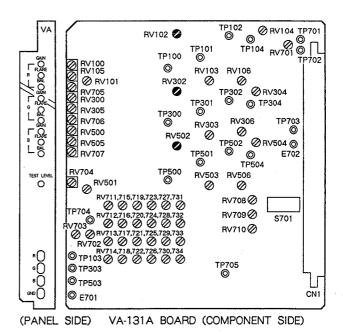
 - RV302/VA-131A board (Serial No. 42701 and higher)
- Perform the adjustment R-ch and B-ch in the same manners 1 and 2.





(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the VA-86 board with a suffix of −12.
 Suffix −11; Serial No. Up to 40300
 Suffix −12; Serial No. 40301 to 42700



Note: After the adjustment, set all adjustment value that is displayed on the display block to "0" with control knobs.



3-11. V MOD BALANCE ADJUSTMENT

Equipment:

Waveform monitor

To be extended:

VA-86 board

Preparation

CLOSE button/MSU-350 → "ON"

• V MOD button/MSU-350 → "ON"

MASTER GAIN select button/MSU-350→"0"

Test point:

MONITOR OUT connector

(camera side panel)

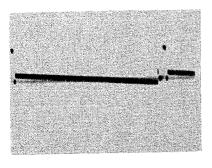
Adjustment Procedures

VA-86 board (GND;E1)

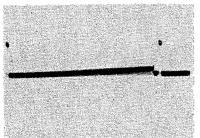
	Video signal select button /BVP-370P (rear panel)	Adj. point	
G-ch	G	ØRV9	
R-ch	R	ØRV5	
B-ch	В	⊘ RV15	

Specification:

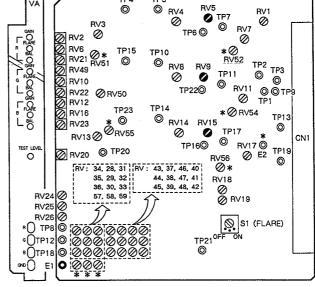
Adjust above controls so that the waveform does not change even if the control knob on the MSU-350 is turned fully clockwise or counterclockwise.











(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700

Note: After the adjustment, set knobs and button as follows.

- Set all adjustment value that is displayed on the display block to "0" with control knobs.
- V MOD button/MSU-350 → "OFF"



3-11. V MOD BALANCE ADJUSTMENT

Equipment:

Waveform monitor

To be extended: VA-131A board

Preparation

CLOSE button/MSU-350 → "ON"

V MOD button/MSU-350 → "ON"

MASTER GAIN select button/MSU-350→"0"

Test point:

MONITOR OUT connector

(camera side panel)

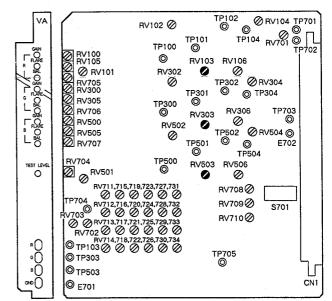
Adjustment Procedures

VA-131A board

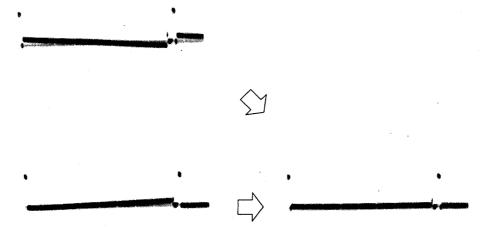
	Video signal select button /BVP-370P (rear panel)	Adj. point
G-ch	G	
R-ch	R	ØRV103
B-ch	В	

Specification:

Adjust above controls so that the waveform does not change even if the control knob on the MSU-350 is turned fully clockwise or counterclockwise.



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)



Note: After the adjustment, set knobs and button as follows.

- Set all adjustment value that is displayed on the display block to "0" with control knobs.
- V MOD button/MSU-350 → "OFF"



3-12. TEST SIGNAL ADJUSTMENT

Equipment:

Oscilloscope

To be extended:

VA-86 board

Preparation

MASTER GAIN select button/MSU-350→"0"

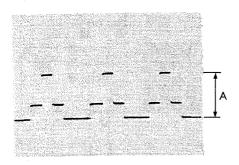
Test point:

TP13 (GND; E1)/VA-86 board

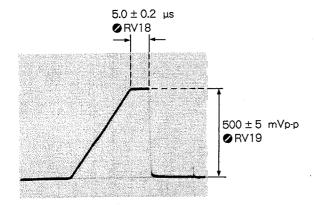
Adjustment Procedures

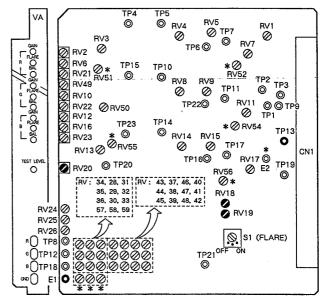
1. TEST 2 button/MSU-350 → "ON"

2. Adjusting point: **⊘** RV20/VA-86 board Specification: A=500 ± 5 mVp-p



- 3. TEST 1 button/MSU-350 → "ON"
- 4. Adjust RV18 and RV19/VA-86 board as follows.





(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700

Note: After the adjustment, set button as follows. TEST 1 button/MSU-350 → "OFF"



3-12. TEST SIGNAL ADJUSTMENT

Equipment:

Oscilloscope

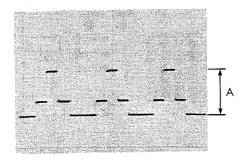
To be extended: VA-86 board

Preparation

MASTER GAIN select button/MSU-350→"0"

Adjustment Procedures

- 1. TEST 2 button/MSU-350 → "ON"
- 2. Test point: TP13 (GND; E1)/VA-86 board Adjusting point: RV20/VA-86 board Specification: A=500 ± 5 mVp-p

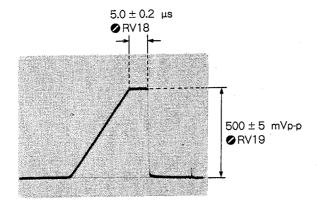


3. Perform adjustment in order of R-ch and B-ch as follows.

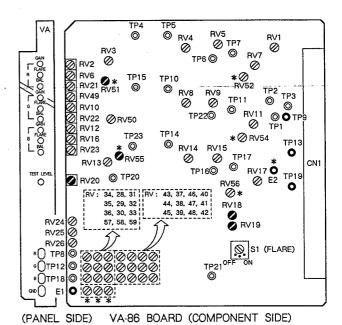
VA-86 board (GND;E2)

i		Test point	Adj. point	Specification
İ	R-ch	TP9	⊘ RV51	Level "A"
	B-ch	TP19	⊘ RV55	Leve: X

- 4. TEST 1 button/MSU-350 → "ON"
- 5. Test point: TP13 (GND; E1)/VA-86 board Adjust @ RV18 and @ RV19/VA-86 board as follows.



Note: After the adjustment, set button as follows. TEST 1 button/MSU-350 → "OFF"



VA-86 board with a suffix of -12.

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700



3-12. TEST SIGNAL ADJUSTMENT

Equipment:

Oscilloscope

To be extended:

VA-131A board

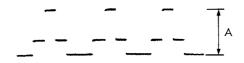
Preparation

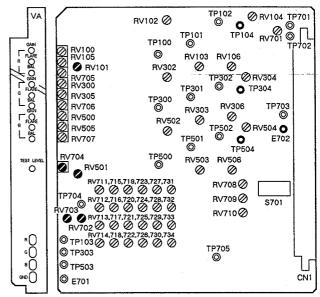
MASTER GAIN select button/MSU-350→"0"

Adjustment Procedures

1. TEST 2 button/MSU-350 → "ON"

 Test point: TP304 (GND; E702)/VA-131A board Adjusting point: RV704/VA-131A board Specification: A=500 ± 5 mVp-p





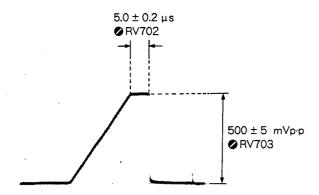
(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

3. Perform adjustment in order of R-ch and B-ch as follows.

VA-131A board (GND;E702)

	Test point	Adj. point	Specification
R-ch	TP104	104 ØRV101	Level "A"
B-ch	TP504	ØRV501	Level A

- 4. TEST 1 button/MSU-350 → "ON"
- Test point: TP304 (GND; E702)/VA-131A board Adjust RV702 and RV703/VA-131A board as follows.



Note: After the adjustment, set button as follows. TEST 1 button/MSU-350 → "OFF"



3-13. PRE KNEE ADJUSTMENT

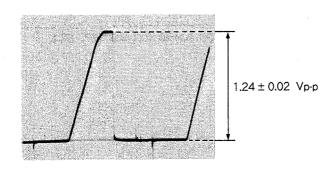
Equipment: Oscilloscope
To be extended: VA-86 board
Preparation

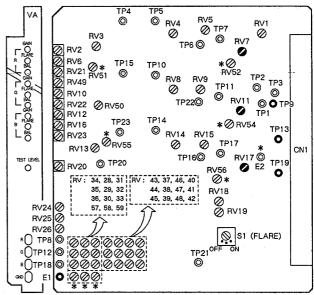
- TEST 1 button/MSU-350 → "ON"
- MASTER GAIN select button/MSU-350→ "9"

Adjustment Procedures

Adjust @ RV11, @ RV7 and @ RV17 as follows.

	Test Point VA-86 Board	Adj. point /VA-86 board	Spec.	
G-ch	TP13 (GND;E1)	⊘ RV11		
R-ch	TP9 (GND;E1)	ØRV7	1.24 ± 0.02 Vp-p	
B-ch	TP19 (GND;E1)	ØRV17		





(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

⊘ RVs identified by marking " * " are mounted on the VA-86 board with a suffix of –12.

Suffix -- 11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700

Note: After the adjustment, set buttons as follows.

TEST 1 button/MSU-350 → "OFF"

MASTER GAIN select button/MSU-350 → "0"

3-14. PEDESTAL ADJUSTMENT

Equipment:

Waveform monitor

Preparation

CLOSE button/MSU-350 → "ON"

- Video signal select button/BVP-370P (rear panel) → "G"
- RESPONSE switch/Waveform monitor → "LOW PASS"

Test point:

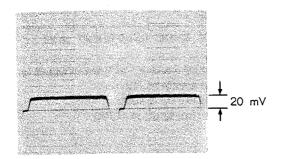
MONITOR OUT connector

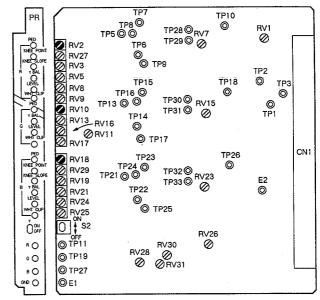
(camera side panel)

Adjustment Procedures

- Set the adjustment value that is displayed on the display block to "0" with MASTER BLACK control.
- 2. Perform adjustment in order of G, R and B with the video signal select button.

	Adj. Point/PR-130	Specification	
G-ch	⊘ RV10 (G PED)		
R-ch		20 mV	
B-ch	⊘ RV18 (B PED)		





(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

B-CH OUT LEVEL ADJUSTMENT

Equipment:

Oscilloscope

To be extended: IE-26P board

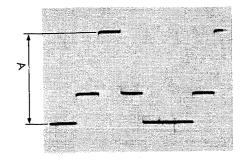
Preparation

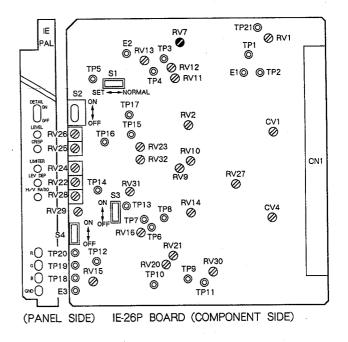
TEST 2 button/MSU-350 → "ON"

Adjusting point: RV7/IE-26P board

Adjustment Procedures

 Measure peak signal level at IE B-channel input TPA23 (GND;E1)/extension board and adjust Ø RV7/IE-26P to give the same level at B-channel output TPA26 (GND;E1).





3-16. G-CH OUT LEVEL ADJUSTMENT

Equipment:

Oscilloscope

To be extended:

IE-26P board

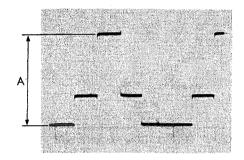
Preparation

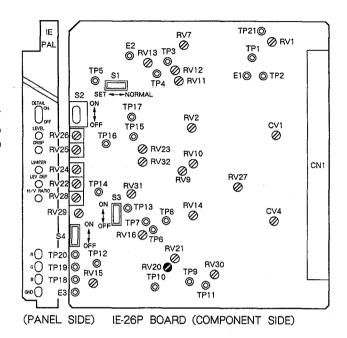
TEST 2 button/MSU-350 → "ON"

Adjustment Procedures

• Measure peak signal level at IE G-channel input TPA17 (GND;E1)/extension board and adjust

RV20/IE-26P to give the same level at G-channel output TPA20 (GND;E1).





3-17. R-CH OUT LEVEL ADJUSTMENT

Equipment:

Oscilloscope

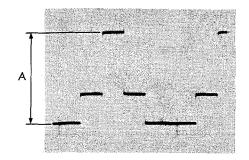
To be extended: IE-26P board

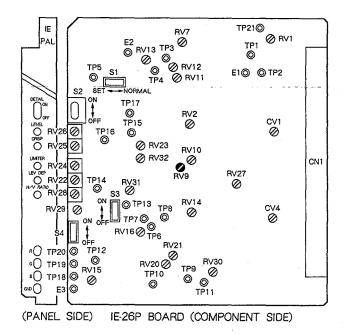
Preparation

• TEST 2 button/MSU-350 → "ON" Adjusting point: RV9/IE-26P board

Adjustment Procedures

 Measure peak signal level at IE R-channel input TPA11 (GND;E1)/extension board and adjust Ø RV9/IE-26P to give the same level at R-channel output TPA14 (GND;E1).





3-18. PR GAIN ADJUSTMENT

Equipment:

Oscilloscope

To be extended:

PR-130 board

Preparation

TEST 1 button/MSU-350→"ON"

KNEE OFF button/MSU-350 → light up

PV17 (G WHT CLIP)

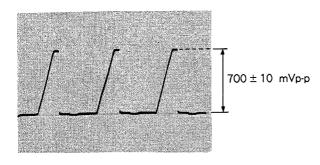
● RV9 (R WHT CLIP) /PR-130 board

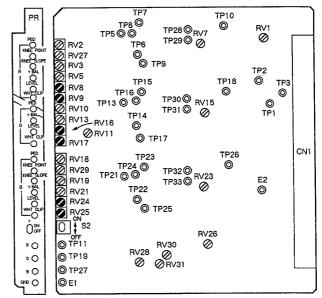
ØRV25 (B WHT CLIP) →

→ fully counterclockwise ()

Adjustment Procedures

	Test Point /Extension board	Adj. Point/ PR-130	Specification
G-ch	TPA20 (GND;E1)	ØRV16 (G GAIN)	
R-ch	TPA14 (GND;E1)	ØRV8 (R GAIN)	700 ± 10 mVp-p
B-ch	TPA26 (GND;E1)	ØRV24 (B GAIN)	·





(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.

Test 1 button/MSU-350 → "OFF"

After "3-13. PR Gain Adjustment", perform "3-21. White Clip Adjustment", if adjustment of step 3-14 through 3-20 is not necessary.

3-19. BLACK SHADING ADJUSTMENT

Equipment:

Waveform monitor

To be extended:

VA-86/131A board

Preparation

- CLOSE button/MSU-350 → "ON"
- MASTER GAIN select button/MSU-350 → "+9"
- Video Signal Select button/BVP-370P (rear panel) → "G"
- Test point:

RESPONSE switch/waveform monitor → "LOW PASS" MONITOR OUT connector (camera

side panel)

Adjustment Procedures

Perform adjustment in order of G, R and B with the video signal select button.

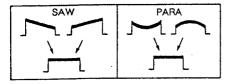
Serial No. 40001 to 42700 (VA-86 board)

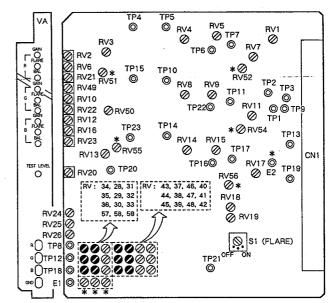
	BLK H SAW	BLK H PARA	BLK V SAW	BLK V PARA
G-ch	ØRV29	ØRV35		ØRV44
R-ch	ØRV28	ØRV34	Ø RV37	ØRV43
B-ch	ØRV30	Ø RV36	ØRV39	ØRV45

Serial No. 42701 and higher (VA-131A board)

BLK H SAW	BLK H PARA	BLK V SAW	BLK V PARA
ØRV715	⊘ RV716	⊘ RV717	ØRV718
⊘ RV711	ØRV712	ØRV713	ØRV714
⊘ RV719	ØRV720	ØRV721	ØRV722
	⊘ RV715 ⊘ RV711		⊘RV715 ⊘RV716 ⊘RV717 ⊘RV711 ⊘RV712 ⊘RV713

Adjust the waveform for flat



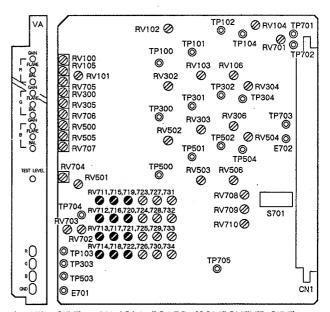


VA-86 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows. MASTER GAIN select button/MSU-350 → "0"

3-20. WHITE SHADING ADJUSTMENT

Equipment:

Waveform monitor

To be extended:

VA-86/131A board

Preparation

GAMMA SELECT (OFF) button/MSU-350 → light up

Video Signal Select button/BVP-370P (rear panel) → "G"

Object:

White window chart

Lens zoom:

Adjust the zoom control of the lens so that the white portion of the white window chart fully occupies the monitor

screen.

Lens iris:

Adjust the iris control so that the video

level at MONITOR OUT connector (camera side panel) is 650 ± 10 mV.

Test point:

MONITOR OUT connector (camera

side panel)

Adjustment Procedures

 Perform adjustment in order of G, R and B with the video signal select button.

Serial No. Up to 40300 (VA-86 board)

$\overline{}$	WHT H SAW	WHT V SAW	WHT V PARA
G-ch	⊘ RV32	ØRV41	Ø RV47
R-ch	Ø RV31	Ø RV40	⊘ RV46
B-ch	Ø RV33	ØRV42	Ø RV48

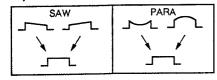
Serial No. 40301 to 42700 (VA-86 board)

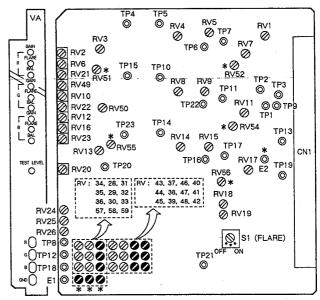
eg	WHT H SAW	WHT H PARA	WHT V SAW	WHT V PARA
G-ch	Ø RV32	Ø RV58	ØRV41	Ø RV47
R-ch	Ø RV31	Ø RV57	Ø RV40	Ø RV46
B-ch	Ø RV33	Ø RV59	⊘ RV42	Ø RV48

Serial No. 42701 and higher (VA-131A board)

$\overline{}$	WHT H SAW	WHT H PARA	WHT V SAW	WHT V PARA
G-ch	Ø RV727	Ø RV728	⊘ RV729	⊘ RV730
R-ch	Ø RV723	ØRV724	⊘ RV725	Ø RV726
B-ch	ØRV731	ØRV732	Ø RV733	Ø RV734

Adjust the waveform for flat



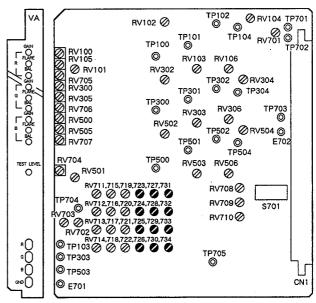


(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

◆ RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12.

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.

GAMMA SELECT (OFF) button/MSU-350 → lamp goes off GAMMA SELECT (0.45) button/MSU-350 → light up



3-21. FLARE ADJUSTMENT

Equipment:

Waveform monitor

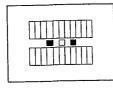
Preparation

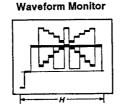
- Video signal select button/BVP-370P (rear panel) → "G"
- S1 (FLARE) /VA-86 board → "ON"

Object:

Gray scale chart

Monitor Screen





Lens zoom:

Adjust the zoom control of the lens so that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the video level at MONITOR OUT connector

(camera side panel) is 700 \pm 10 mV.

Test point:

MONITOR OUT connector (camera

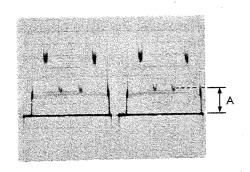
side panel)

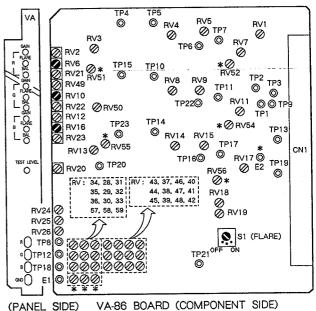
Adjustment Procedures

1. ORV6 R FLARE /VA-86 board

→ fully counterclockwise ○.

- Video Signal select button/BVP-370P (rear panel) → "R"
- 3. Measure level A.



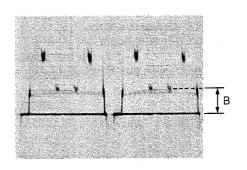


(PANEL SIDE)

RVs identified by marking " * " are mounted on the VA-86 board with a suffix of -12. Suffix -11; Serial No. Up to 40300 Suffix -12; Serial No. 40301 to 42700

4. Perform adjustment in order of G and B with the video signal select button.

	Adj. point/VA-86 Board	Spec.	
G-ch	⊘RV10 (G FLARE)	B=A	
B-ch		D=A	





3-21. FLARE ADJUSTMENT

Equipment:

Waveform monitor

Preparation

- GAMMA SELECT (0.45) button/MSU-350 → light up
- Video signal select button/BVP-370P (rear panel) → "G"

 RV10 (G FLARE)

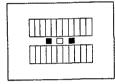
ØRV16 (B FLARE) ✓

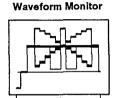
→ fully counterclockwise ()

Object:

Gray scale chart

Monitor Screen





Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the

underscanned monitor frame.

Lens iris:

Test point:

Adjust the iris control so that the video level at MONITOR OUT connector

(camera side panel) is 700 \pm 10 mV. MONITOR OUT connector (camera

side panel)

Adjustment Procedures

 Perform adjustment in order of G, R and B with the video signal select button.

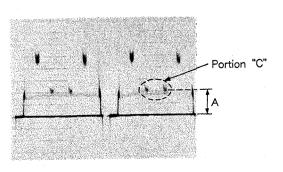
VA-86 board

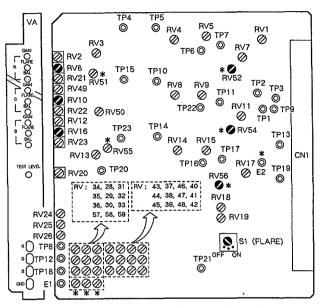
abla	Adj. point	How to adjust
	@RV54	Adjust so that the portion "C" of the
R-ch	⊘ RV52	waveform does not fluctuate even when the S1 (FLARE)/VA-86 board is turned
B-ch	⊘ RV56	ON or OFF.

- S1 (FLARE)/VA-86 board → "ON"
 - ORV6 R FLARE /VA-86 board

→ fully counterclockwise ().

- 3. Video Signal select button/BVP-370P (rear panel) → "R"
- 4. Measure level A.

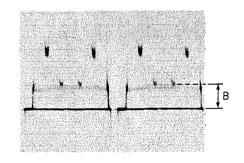




(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

5. Perform adjustment in order of G and B with the video signal select button.

	Adj. point/VA-86 Board	Spec.	
G-ch		B=A	
B-ch			



Serial No. 42701 and higher

3-21. FLARE ADJUSTMENT

Equipment: Preparation

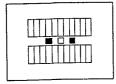
Waveform monitor

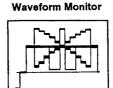
- GAMMA SELECT (0.45) button/MSU-350 → light up
- Video signal select button/BVP-370P (rear panel) → "G"
- • RV305 (G FLARE)
 - ORV105 (R FLARE) > /VA-131A board
 - RV505 (B FLARE)
 → fully counterclockwise
 O

Object:

Gray scale chart

Monitor Screen





Lens zoom:

Adjust the zoom control of the lens so that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the video level at MONITOR OUT connector

(camera side panel) is 700 ± 10 mV.

Test point:

MONITOR OUT connector (camera side

panel)

Adjustment Procedures

 Perform adjustment in order of G, R and B with the video signal select button.

VA-131A board

	Adj. point	
G-ch	⊘ RV304	Adjust so that the portion "C" of the
R-ch	ØRV104	waveform does not fluctuate even when the S1 (FLARE)/VA-131A board is turn
B-ch	⊘ RV504	ON or OFF.

2. PV305 (G FLARE)

ØRV105 (R FLARE) ⟩ /VA-131A board

→ fully clockwise ()

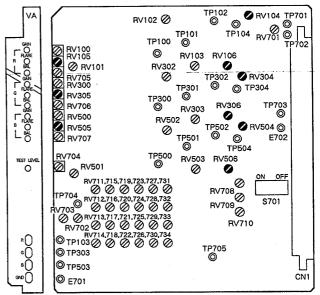
CLOSE button/MSU-350 → "ON"

3. VA-131 board

	Adj. point	
G-ch	⊘ RV306	Adjust so that the pedestal level of the waveform does not fluctuate even when the S1 (FLARE)/VA-131A board is turned ON or OFF
R-ch	⊘ RV106	
B-ch	⊘ RV506	ON or OFF.

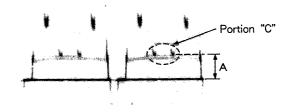
- Adjust the iris control so that the video level at MONITOR OUT connector (camera side panel) is 700 ± 10mV.
- 5. S701 (FLARE)/VA-131 board → "ON"
 - RV105 R FLARE /VA-131A board

→ fully counterclockwise ().



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

- 6. Video Signal select button/BVP-370P (rear panel) → "R"
- 7. Measure level A.



Perform adjustment in order of G and B with the video signal select button.

	Adj. point/VA-131A Board	Spec.	
G-ch	ØRV305 (G FLARE)	B=A	
B-ch	ØRV505 (B FLARE)	D=A	



3-22. GAMMA BALANCE ADJUSTMENT

Equipment:

Oscilloscope

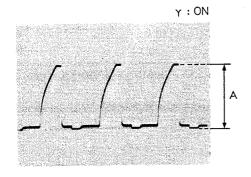
Preparation

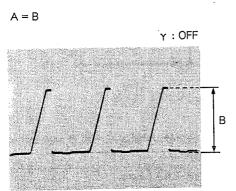
- TEST 1 button/MSU-350 → "ON"
- GAMMA SELECT (0.45) button/MSU-350 → light up

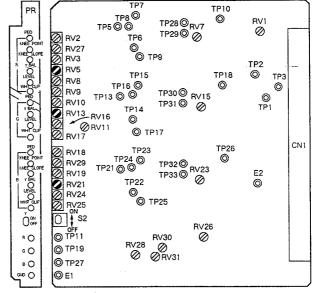
Adjustment Procedures

Adjust the following controls so that the peak level of the waveform does not fluctuate even when the GAMMA SELECT (OFF) button on the MSU-350 is turned ON (lamp goes off) and OFF (light up).

	Test Point/Extension board	Adj. Point/PR-130		
G-ch	TPA20 (GND;E1)			
R-ch	TPA14 (GND;E1)	ORV5 (R γ BAL)		
B-ch	TPA26 (GND;E1)	RV21 (Β γ BAL)		







(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

Note: After the adjustment, set button as follows.

GAMMA SELECT (0.45) button/MSU-350 → light up

GAMMA SELECT (OFF) button/MSU-350 → lamp goes off

TEST 1 button/MSU-350 → "OFF"

3-23. GAMMA CORRECTION ADJUSTMENT

Equipment:

Waveform monitor

To be extended: PR-130 board

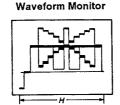
Preparation

- Video Signal Select button/BVP-370P (rear panel) → "G"
- RESPONSE switch/waveform monitor → "LUM"

Object:

Gray scale chart (Sony standard chart)





Lens zoom:

Adjust the zoom control of the lens so that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the video level at MONITOR OUT connector

(camera side panel) is 700 \pm 10 mV.

Test point:

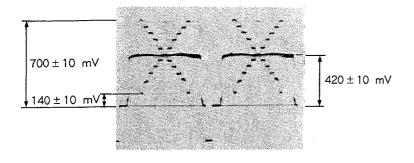
MONITOR OUT connector

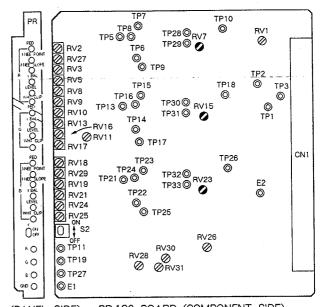
(camera side panel)

Adjustment Procedures

· Before adjustment, select the channel in order of G, R and B with the video signal select button and adjust the peak level at the MONITOR OUT connector to 700 \pm 10 mV with iris control and adjust the video level in first step on the gray scale waveform to 140 \pm 10 mV with MASTER BLACK control/MSU-350 respectively.

	Adj. Point/PR-130	Specification	
G-ch	RV15 (G γ)		
R-ch		420 ± 10 mV	
B-ch			_





(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

3-24. KNEE CORRECTION ADJUSTMENT

Equipment: Oscilloscope **To be extended:** PR-130 board

Preparation

- TEST 1 button/MSU-350 → "ON"
- GAMMA SELECT (OFF) button/MSU-350 → light up
- KNEE OFF button/MSU-350→"ON" (Lamp goes off)

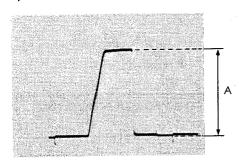
Adjustment Procedure

- AUTO KNEE button/MSU-350→"OFF" (Lamp goes off) MASTER GAIN select button/MSU-350→"6"
- 2. Test point: TP14 (GND;E1)/PR-130 board Adjusting point:

 RV28 (G KNEE POINT)

/PR-130 board

Specification: A=960 ± 10 mVp-p



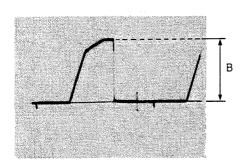
3. Perform adjustment in order of R-ch and B-ch as follows.

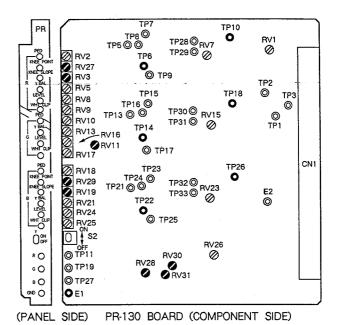
PR-130 board

	Test point	Adj. point	Specification
R-ch	TP6 (GND;E1)	Ø RV27	Level "A"
B-ch	TP22 (GND;E1)	ØRV29	

/PR-130 board

Specification: $B=1.85 \pm 0.02 \text{ Vp-p}$



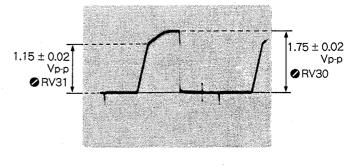


5. Perform adjustment in order of R-ch and B-ch as follows.

PR-130 board

	Test point	Adj. point	Specification
R-ch	TP10 (GND;E1)	ØRV3	Level "B"
B-ch	TP26 (GND;E1)	⊘ RV19	

- MASTER GAIN select button/MSU-350 → "9"
 AUTO KNEE button/MSU-350 → "ON" (light up)



Note: After the adjustment, set buttons as follows.

MASTER GAIN select button/MSU-350→"0"

AUTO KNEE button/MSU-350→"OFF"

GAMMA SELECT (OFF) button/MSU-350→lamp goes off

3-25. WHITE CLIP ADJUSTMENT

Equipment:

Waveform monitor

Preparation

TEST 1 button/MSU-350 → "ON"

MASTER GAIN select button/MSU-350 → "18"

Test point:

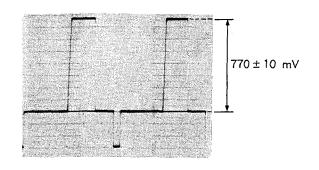
MONITOR OUT connector (camera

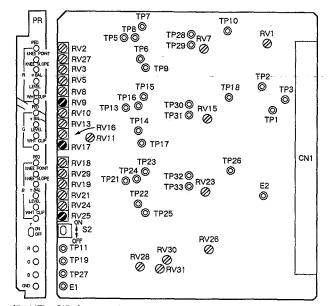
side panel)

Adjustment Procedures

 Perform adjustment in order of G, R and B with the video signal select button.

	Adj. Point/PR-130	Specification	
G-ch	ØRV17 (G WHT CLIP)		
R-ch	ØRV9 (R WHT CLIP)	Peak level =770 ± 10 mV	
B-ch	Ø RV25 (B WHT CLIP)	=770 ± 101110	





(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

Note: After adjustment, set buttons as follows.

MASTER GAIN select button/MSU-350→"0"

TEST 1 button/MSU-350→"OFF"

DETAIL SIGNAL SYSTEM ADJUSTMENT STEP4.

4-1. IE-26P BOARD +5V CONFIRMATION

Note: This adjustment influences operation of the IE-26P board.

Therefore, when this adjustment is carried out, all of following adjustments in DETAIL SIGNAL SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Equipment:

Digital voltmeter

To be extended:

IE-26P board

Test point:

TP1 (GND; E1)/IE-26P board

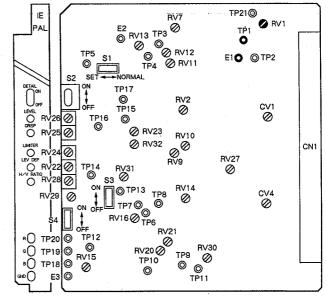
Adjusting point:

Specification:

 $+5.0\pm0.02\,\mathrm{Vdc}$

Adjustment Procedures

• Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

4-2. V DTL NULL ADJUSTMENT

Equipment:

Oscilloscope

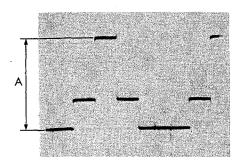
To be extended: IE-26P board

Preparation

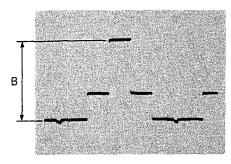
TEST 2 button/MSU-350→"ON"

Adjustment Procedures

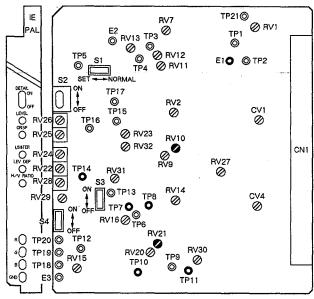
1. Measure a level A of TP10 (GND; E1) /IE-26P board.



- 2. Adjust PRV21/IE-26P board so that a level of TP11 (GND; E1) /IE-26P board is the same as A.
- 3. Measure a level B of TP7 (GND; E1) /iE-26P board.

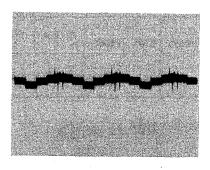


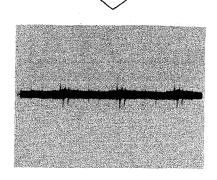
- 4. Adjust PV10/IE-26P board so that a level of TP8 (GND; E1) /IE-26P board is the same as B.
- 5. Make sure that the waveform of TP14 (GND; E1)/IE-26P board is flat. If the waveform is not flat, make fine tuning alternately with RV10 and O RV21/IE-26P board.



(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)

TP14 (GND;E1)/IE-26P board





IE FREQUENCY RESPONSE ADJUSTMENT

Equipment:

Oscilloscope IE-26P board

To be extended: Object:

Burst chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the 1.0 MHz level at MONITOR OUT connector

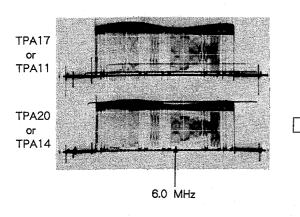
(camera side panel) is 700 \pm 10 mV.

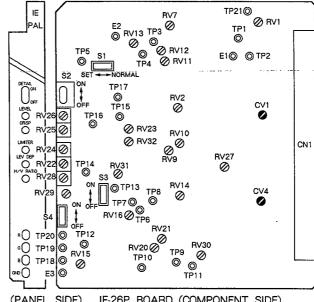
Adjustment Procedure

Adjust the following OVs so that the input level and output level at 6.0 MHz portion are almost equal as shown below.

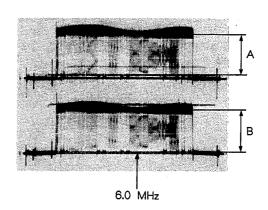
IE-26P board

	Test point (Input signal)	Test point (Output signal)	Adjusting point	Specification (6.0 MHz)
G-ch	TPA17 (GND;TPB17)	TPA20 (GND;TPB20)	ØCV4	A ≒ B
R-ch	TPA11 (GND;TPB11)	TPA14 (GND:TPB14)	ØCV1	A ≒ B





(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)



4-4. G-CH 1H PHASE ADJUSTMENT

Note: Perform the adjustment only when changing the delay line (DL5).

Equipment:

Waveform monitor

To be extended: IE-26P board

Preparation

KNEE OFF button/MSU-350 → "OFF" (light up)

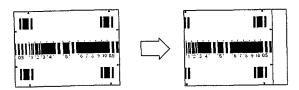
DETAIL OFF button/MSU-350 → "OFF" (light up)

GAMMA SELECT (OFF) button/MSU-350 → light up

Video signal select button/BVP-370P (rear panel) → "G"

Object:

Burst chart



Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the 1.0

MHz level at MONITOR OUT connector

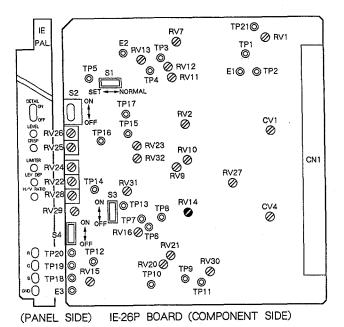
(camera side panel) is 700 \pm 10 mV.

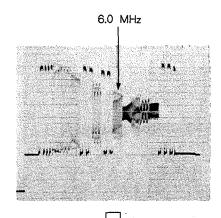
Test point:

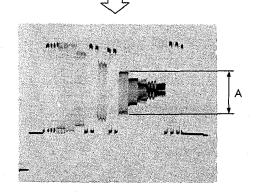
MONITOR OUT connector

(camera side panel)

- 1. Push the WHITE button (AUTO SETUP button)/MSU-350 for performing the automatic white balance.
- 2. Make the camera head pan so that the 6.0 MHz portion at burst chart is positioned in the center of monitor screen.
- 3. Adjust the focus control of the lens so that the 6.0 MHz portion is just focused.
- 4. Push both "G" and "B" of the video signal select button/BVP-370P (rear panel).
- 5. Adjust ♥ RV14/IE-26P board so that the 6 MHz aliasing signal level "A" is minimum.







G-CH 1H/2H PHASE ADJUSTMENT 4-5.

Note: Perform the adjustment only when changing the delay line (DL5).

Equipment:

Oscilloscope

To be extended:

IE-26P board

Object:

Burst chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the

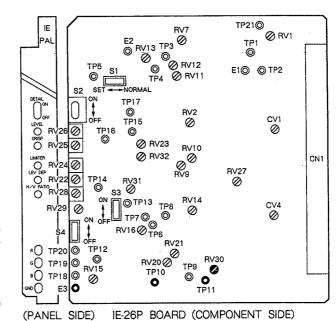
underscanned monitor frame.

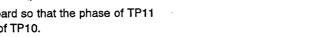
Lens iris:

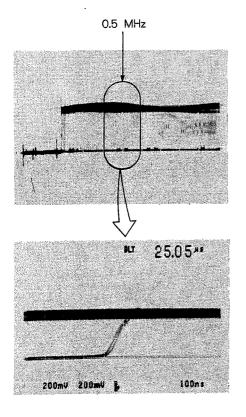
Adjust the iris control so that the 1.0 MHz level at MONITOR OUT connector

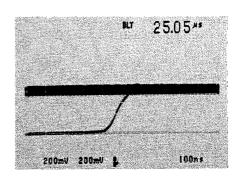
(camera side panel) is 700 \pm 10 mV.

- 1. Connect the CH-1 probe of oscilloscope to TP10 (GND;E3)/IE-26P board.
- 2. Connect the CH-2 probe of oscilloscope to TP11 (GND;E3)/IE-26P board.
- 3. Adjust @ RV30/IE-26P board so that the phase of TP11 coincides with the phase of TP10.









4-6. R-CH 1H PHASE ADJUSTMENT

Note: Perform the adjustment only when changing the delay line (DL1).

Equipment:

Waveform monitor

To be extended: IE-26P board

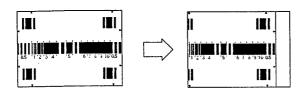
Preparation

KNEE OFF button/MSU-350 → "OFF" (light up)

- DETAIL OFF button/MSU-350 → "OFF" (light up)
- GAMMA SELECT (OFF) button/MSU-350 → light up
- Video signal select button/BVP-370P(rear panel) → "G"

Object:

Burst chart



Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the underscanned monitor frame.

Lens iris:

Adjust the iris control so that the 1.0 MHz level at MONITOR OUT connector

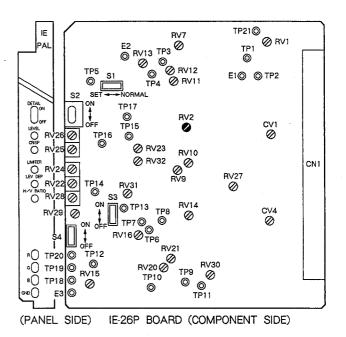
(camera side panel) is 700 ± 10 mV.

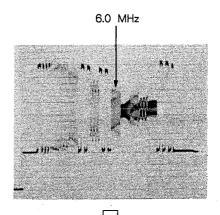
Test point:

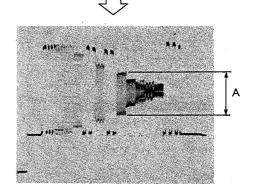
MONITOR OUT connector

(camera side panel)

- 1. Push the WHITE button (AUTO SETUP button)/MSU-350 for performing the automatic white balance.
- 2. Make the camera head pan so that the 6.0 MHz portion at burst chart is positioned in the center of monitor screen.
- 3. Adjust the focus control of the lens so that the 6.0 MHz portion is just focused.
- 4. Push both "G" and "R" of the video signal select button/BVP-370P (rear panel).
- 5. Adjust PRV2/IE-26P board so that the 6 MHz aliasing signal level "A" is minimum.







4-7. R-CH 1H/2H PHASE ADJUSTMENT

Note: Perform the adjustment only when changing the delay line (DL1).

Equipment:

Oscilloscope

To be extended:

IE-26P board

Object:

Burst chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so that the chart frame matches the

underscanned monitor frame.

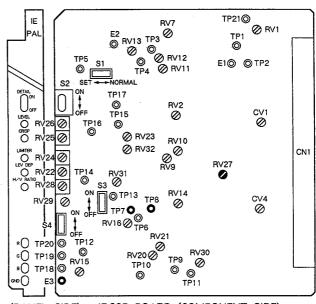
Lens iris:

Adjust the iris control so that the 1.0 MHz level at MONITOR OUT connector

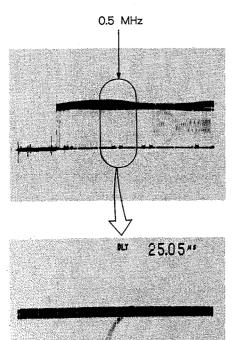
(camera side panel) is 700 \pm 10 mV.

Adjustment Procedures

- Connect the CH-1 probe of oscilloscope to TP7 (GND;E3)/IE-26P board.
- 2. Connect the CH-2 probe of oscilloscope to TP8 (GND;E3)/IE-26P board.
- Adjust ○ RV27/IE-26P board so that the phase of TP8 coincides with the phase of TP7.

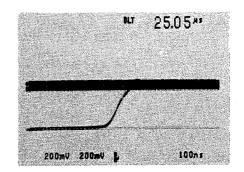


(PANEL SIDE) IE-26P BOARD (COMPONENT SIDE)



200mV 200mV

100ns



4-8. H DTL BALANCE ADJUSTMENT

Equipment:

Oscilloscope

To be extended: IE-26P board

Preparation

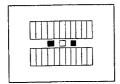
- DETAIL OFF button/MSU-350 → "ON" (lamp goes off)
- Video signal select button/ BVP-370P (rear panel) → "G"
- S2 (DTL)/IE-26P board → "ON"
- - → fully counterclockwise ○
- - → fully counterclockwise ○
- ORV25 (CRISP)/IE-26P board

→ fully counterclockwise ()

Object:

Gray scale chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so

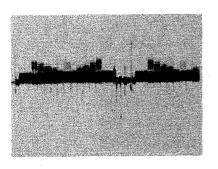
that the chart frame matches the

underscanned monitor frame.

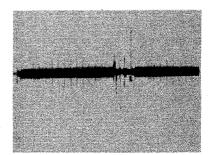
Lens iris:

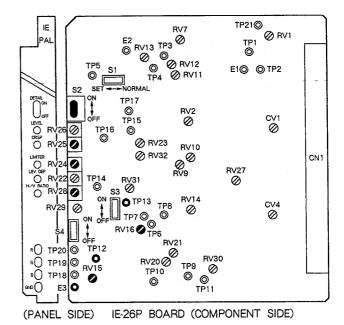
Adjust the iris control so that the video level at the MONITOR OUT connector (camera side panel) is 650 \pm 10 mV.

- 1. Adjust @ RV15 (LF DTL) on the IE-26P board so that the waveform at TP12 (GND; E3) on the IE-26P board
- 2. Adjust @ RV16 (HF DTL) on the IE-26P board so that the waveform at TP13 (GND; E3) on the IE-26P board









4-9. HF/LF DTL BALANCE ADJUSTMENT

Equipment:

Waveform monitor

To be extended:

IE-26P board

Preparation

Video signal select button/BVP-370P (rear panel) → "G"

LINE SELECTOR (Waveform monitor) → "VAR"

Object:

Burst chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so that the chart frame matches the

underscanned monitor frame.

Lens iris:

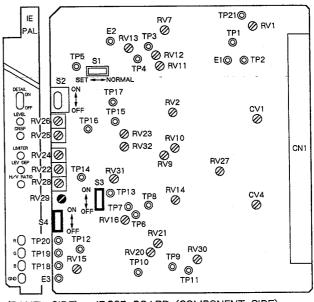
Adjust the iris control so that the video

level at the MONITOR OUT connector (camera side panel) is 700 \pm 10 mV.

Test point:

MONITOR OUT connector (camera

side panel)



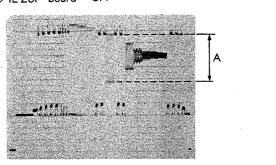
(PANEL SIDE)

IE-26P BOARD (COMPONENT SIDE)

Adjustment Procedures

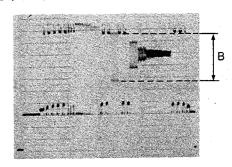
 S3/IE-26P board → "ON" S4/IE-26P board → "OFF"

- 2. Measure the detail level A at 5 MHz.
- 3. S3/IE-26P board → "OFF" S4/IE-26P board → "ON"
- 4. Measure the detail level B at 5 MHz.
- Adjust RV29/IE-26P board so that the levels A and B
 are equal even when the switches S3 and S4 are set
 according to any setting of procedures 1 and 3.



LINE SELECTOR: VAR

S3/IE-26P board→OFF S4/IE-26P board→ON



LINE SELECTOR: VAR

Note: After the adjustment, set switches as follows.

S3/IE-26P board → "ON" S4/IE-26P board → "ON" A = B

4-10. DC OFFSET ADJUSTMENT

Equipment:

Oscilloscope

To be extended: IE-26P board

Preparation

DETAIL OFF button/MSU-350 → "ON" (lamp goes off)

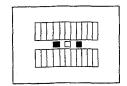
Video signal select button/BVP370P (rear panel) → "G"

S2 (DTL)/IE-26P board → "ON"

Object:

Gray scale chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the video

level at the MONITOR OUT connector

(camera side panel) is 650 ± 10 mV.

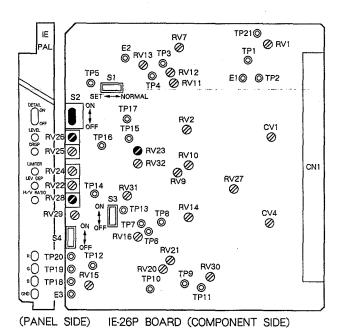
Test point: Adjusting point:

TPA28 (GND; E1)/extention board RV23 (OFFSET) IE-26P board

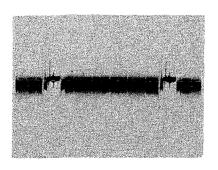
Specification:

Adjust the waveform for flat.

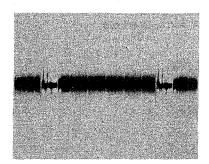
- 1. Set PV28 (H/V RATIO) on the IE-26P board to mechanical center and turn @ RV26 (DTL GAIN) on the IE-26P board fully clockwise ().
- 2. Adjust PRV23/IE-26P board so that the waveform is











4-11. LEVEL DEPENDENT ADJUSTMENT

Equipment:

Waveform monitor

To be extended:

IE-26P board

Preparation

DETAIL OFF button/MSU-350→"ON" (lamp goes off)

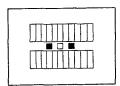
Video signal select button/BVP-370P (rear panel) → "G"

S2 (DTL)/IE-26P board → "ON"

Object:

Gray scale chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the video

level at the MONITOR OUT connector

(camera side panel) is 650 ± 10 mV.

Test point:

MONITOR OUT connector (camera

side panel)

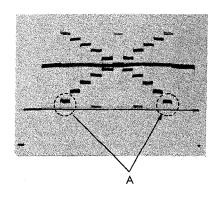
Adjustment Procedures

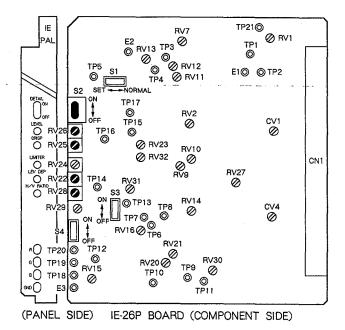
1. Set RV28 (H/V RATIO) on the IE-26P board to mechanical center.

Turn RV25 (CRISPNING) on the IE-26P board fully counterclockwise ().

Turn @ RV26 (DTL GAIN) on the IE-26P board fully clockwise ().

2. Turn PRV22 (LEVEL DEPENDENT) on the IE-26P board from the leftmost position clockwise slowly and stop where the spikes portion A start to decrease.





4-12. CRISPNING ADJUSTMENT

Equipment:

Waveform monitor

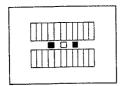
Preparation

- DETAIL OFF button/MSU-350 → "ON" (lamp goes off)
- Video signal select button/BVP-370P (rear panel) → "G"
- S2 (DTL)/IE-26P board → "ON"

Object:

Gray scale chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the video level at the MONITOR OUT connector

(camera side panel) is 650 ± 10 mV.

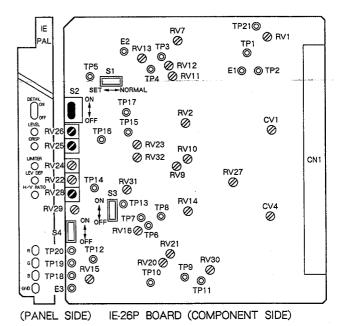
Test point:

MONITOR OUT connector (camera

side panel)

Adjustment Procedures

- Set RV28 (H/V RATIO) on the IE-26P board to mechanical center.
 - Set **O** RV26 (DTL GAIN) on the IE-26P board to mechanical center.
- Observe the waveform monitor and turn PRV25 (CRISPNING) on the IE-26P board clockwise until the noise on the black areas of the picture just starts to be reduced. Otherwise adjust to your preferred level.



5-45

4-13. DTL LIMITER ADJUSTMENT

Equipment:

Waveform monitor

Preparation

• DETAIL OFF button/MSU-350 → "ON" (lamp goes off)

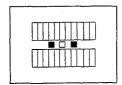
Video signal select button/BVP-370P (rear panel) → "G"

• S2 (DTL)/IE-26P board → "ON"

Object:

Gray scale chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the video level at the MONITOR OUT connector

(camera side panel) is 650 ± 10 mV.

Test point:

MONITOR OUT connector (camera

side panel)

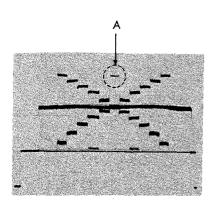
Adjustment Procedures

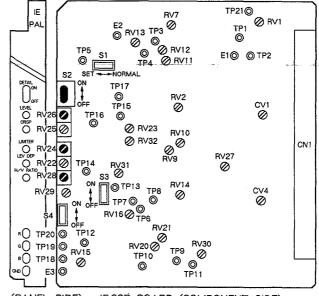
1. Set PV28 (H/V RATIO) on the IE-26P board to mechanical center.

Turn RV24 (LIMITER) on the IE-26P board fully counterclockwise \bigcirc .

Turn PRV26 (DTL GAIN) on the IE-26P board fully clockwise ().

2. Turn RV24 (LIMITER) on the IE-26P board clockwise slowly and stop where the spike at portion A becomes 2/3 of its maximum size.





(PANEL SIDE)

IE-26P BOARD (COMPONENT SIDE)

4-14. H/V RATIO ADJUSTMENT

Equipment:

Waveform monitor

B/W monitor

Preparation

DETAIL OFF button/MSU-350 → "ON" (lamp goes off)

Video signal select button/BVP-370P (rear panel) → "G"

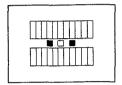
• S2 (DTL)/IE-26P board → "ON"

 RV26 (DTL GAIN)/IE-26P board → fully clockwise ○

Object:

Gray scale chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control so that the video

level at the MONITOR OUT connector

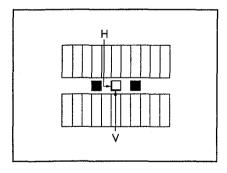
(camera side panel) is 650 \pm 10 mV.

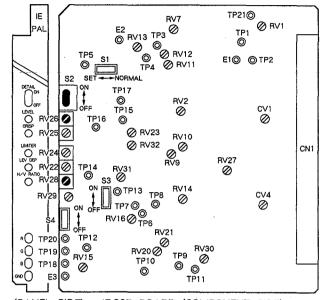
Test point:

B/W monitor

Adjustment Procedures

1. Adjust RV28 (H/V RATIO) on the IE-26P board so that both horizontal and vertical detail levels are equal.





(PANEL SIDE) IE-26P

IE-26P BOARD (COMPONENT SIDE)

4-15. DTL GAIN ADJUSTMENT

Equipment:

Waveform monitor

B/W Monitor

Preparation

• DETAIL OFF button/MSU-350 → "ON" (lamp goes off)

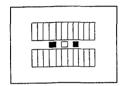
Video signal select button/BVP-370P (rear panel) → "G"

S2 (DTL)/IE-26P board → "ON"

Object:

Gray scale chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the

underscanned monitor frame.

Lens iris:

Adjust the iris control that so the video

level at the MONITOR OUT connector

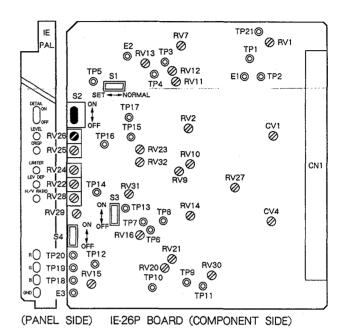
(camera side panel) is 650 \pm 10 mV.

Test point:

B/W monitor

Adjustment Procedures

 Agjust PV26 (DTL GAIN) on the IE-26P board to your preferred detail level.



STEP 5. AUTO CONTROL SYSTEM ADJUSTMENT

5-1. AT-54 BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the AT-54 board.

Therefore, when this adjustment is carried out, all of following adjustments in AUTO CONTROL SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Equipment:

Digital voltmeter

To be extended:

AT-54 board

Test point:

TP2 (GND;E1)/AT-54 board

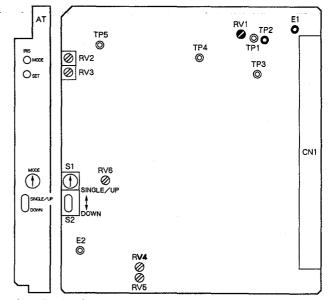
Adjusting point:

Specification:

 $+5.0 \pm 0.02 \, \text{Vdc}$

Adjustment Procedures

 \bullet Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.



(PANEL SIDE) AT-54 BOARD (COMPONENT SIDE)

5-2. AUTO IRIS ADJUSTMENT

Equipment:

Waveform monitor

- Preparation
- AUTO IRIS button/MSU-350 → "ON"
- Video signal select button/BVP-370P (rear panel) → "G"
- S1 MODE /AT-54 board → "1"
- S2 SINGLE/UP ↔ DOWN /AT-54 board

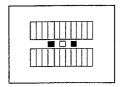
→ push up S2 once

• Press the WHITE button for AUTO SETUP while shooting a gray scale chart with the camera, the WHITE button lights and the white balance is performed automatically. And then, press the BLACK button for AUTO SETUP, it lights. The iris will then be closed and the black balance and black set will be adjusted automatically.

Object:

Gray scale chart

Monitor Screen



Lens zoom:

Adjust the zoom control of the lens so

that the chart frame matches the

underscanned monitor frame.

Test point:

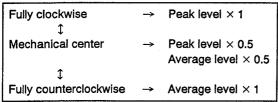
MONITOR OUT connector (camera

side panel)

Adjustment Procedures

1. Put the machine into the auto iris operation mode. Auto iris is a function to control the lens iris constant by detecting the average level or peak level automatically from the video signal that is output from the camera. By turning the RV2 (IRIS MODE) on the AT-54 board, either average level or peak level can be selected.

RV2 (IRIS MODE)



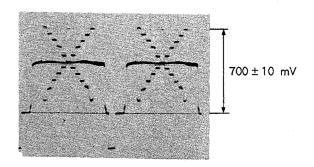
Adjust RV2 (IRIS MODE)to your preferred level. (Normally mechanical center)

RV1 TP2 Ø ⊚ TP2 TP1 TP4 IRS MODE R∨2 RV3 Oset CN1 1 RV4

(PANEL SIDE)

2. Adjust RV3 (IRIS SET) on the AT-54 board so that the peak level is 700 ± 10 mV.

AT-54 BOARD (COMPONENT SIDE)



Note: After the adjustment, set button as follows. AUTO IRIS button/MSU-350 → "OFF" S1 MODE /AT-54 board → "F"

5-3. CHARACTER POSITION ADJUSTMENT

Note: This adjustment should be performed only when the character position on the viewfinder is not proper.

Equipment:

B/W monitor

To be extended:

AT-54 board

Preparation

CLOSE button/MSU-350 → "ON"

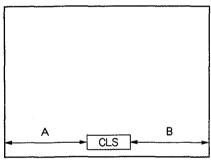
Video signal select button/BVP-370P (rear panel) → "G"

Test point:

Viewfinder screen

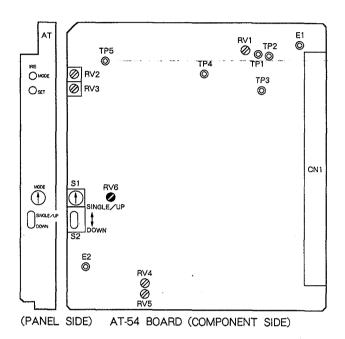
Adjustment Procedures

• Adjust @ RV6 (CHR POSITION) on the AT-54 board so that letter CLS should be displayed and positioned at the center of the viewfinder screen.



viewfinder screen

A = B



5-4. WINDOW GATE ADJUSTMENT

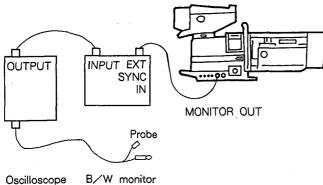
Note: Be sure to feed the picture monitor with EXT SYNC from the MONITOR OUT connector on camera.

Oscilloscope, B/W monitor

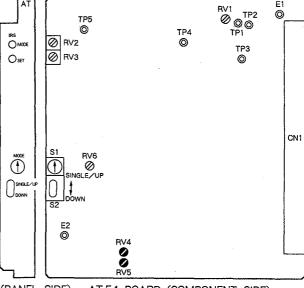
To be extended: AT-54 board

Preparation

- S7(MONITOR SELECT)/MS-33 board → "VF"
- CLOSE button/MSU-350 → "ON"
- Connect the oscilloscope and B/W monitor as follows.



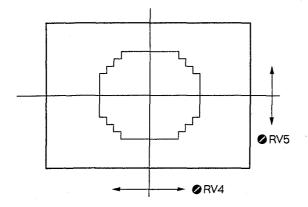




(PANEL SIDE) AT-54 BOARD (COMPONENT SIDE)

Adjustment Procedures

- 1. INPUT RANGE (Oscilloscope) 0.05 to 0.2 VOLTS/DIV
- 2. Connect a probe of oscilloscope to IC19-pin 2.
- 3. Adjust PV4 and RV5 so that the window is the center of B/W monitor.



B/W monitor screen (Underscanned monitor frame)

5-5. CC FILTER SERVO ADJUSTMENT

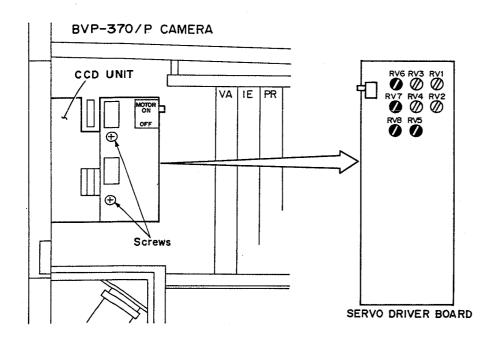
Note: This adjustment should be carried out only when the CC filter does not operate correctly from the MSU or from the camera.

Preparation

- MOTOR ON/OFF switch/servo driver → "ON"
- Remove two screws as shown below.

Adjustment Procedures

- CC filter select button/MSU-350→"A"
 Adjust RV5 (A-SET) so that the CC filter stops at the position "A".
- CC filter select button/MSU-350→"B"
 Adjust RV6 (B-SET) so that the CC filter stops at the position "B".
- CC filter select button/MSU-350→"C"
 Adjust RV7 (C-SET) so that the CC filter stops at the position "C".
- CC filter select button/MSU-350→"D"
 Adjust RV8 (D-SET) so that the CC filter stops at the position "D".
- 5. Make sure that the CC filter operates correctly by the selection from the camera.



5-6. ND FILTER SERVO ADJUSTMENT

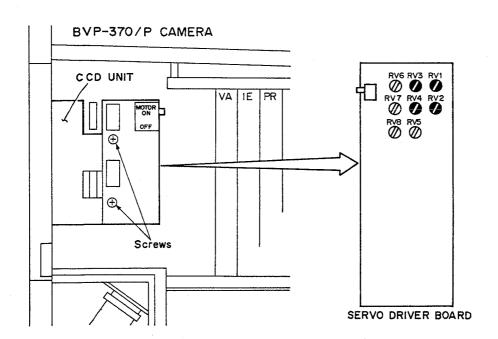
Note: This adjustment should be carried out only when the ND filter does not operate correctly from the MSU or from the camera.

Preparation

- MOTOR ON/OFF switch/servo driver → "ON"
- Remove two screws as shown below.

Adjustment Procedures

- ND filter select button/MSU-350→"0"
 Adjust RV1 (0-SET) so that the ND filter stops at the position "0".
- ND filter select button/MSU-350→"1"
 Adjust RV2 (1-SET) so that the ND filter stops at the position "1".
- ND filter select button/MSU-350→"2"
 Adjust RV3 (2-SET) so that the ND filter stops at the position "2".
- ND filter select button/MSU-350→"3"
 Adjust RV4 (3-SET) so that the ND filter stops at the position "3".
- 5. Make sure that the ND filter operates correctly by the selection from the camera.



STEP 6. VF INTERFACE SYSTEM ADJUSTMENT

6-1. MS-33 BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the MS-33 board.

Therefore, when this adjustment is carried out, all of following adjustments in VF INTERFACE SYSTEM

ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Equipment:

Digital voltmeter

To be extended:

MS-33 board

Test point:

TP2 (GND;E1)/MS-33 board

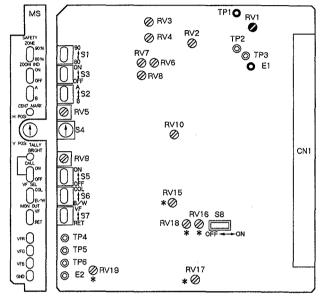
Adjusting point:

Specification:

 $+5.0 \pm 0.02 \, \text{Vdc}$

Adjustment Procedures

• Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.



(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

RVs identified by marking " * " are mounted on the MS-33 board with a suffix of -12.

Suffix -11; Serial No. Up to 40210

Suffix -12; Serial No. 40301 and higher

6-2. SAFETY ZONE ADJUSTMENT

Equipment:

Oscilloscope

To be extended: MS-33 board

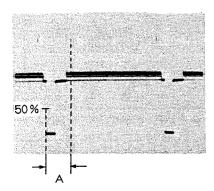
Preparation

- CLOSE button/MSU-350 → "ON"
- Video signal select button/BVP-370P (rear panel) → "G"
- SAFETY ZONE switch/BVP-370P (rear panel) → "ON"
- CENTER MARKER switch/BVP-370P (rear panel)
 - → "OFF"
- CURSOR button/BVP-370P (rear panel) → "OFF"
- S1 (SAFETY ZONE)/MS-33 board → "90%"

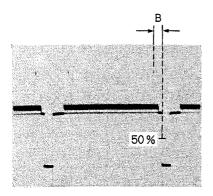
Test point:

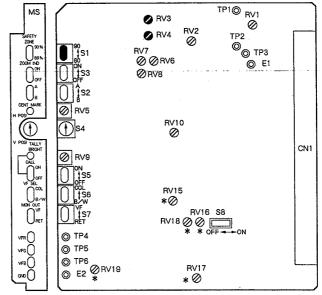
TPA38 (GND;E1)/extension board

Adjustment Procedures



2. Adjusting point: **⊘** RV4/MS-33 board Specification: B=4.3 ± 0.1 μs





(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

♠ RVs identified by marking " * " are mounted on the MS-33 board with a suffix of -12.

Suffix -11; Serial No. Up to 40210

Suffix -12; Serial No. 40301 and higher

Note: After the adjustment, be sure to carry out "6-3. CENTER MARKER H Position Adjustment".

6-3. CENTER MARKER H POSITION ADJUSTMENT

Note: Be sure to complete the "6-2. SAFETY ZONE Adjustment".

Equipment:

Oscilloscope

To be extended:

MS-33 board

Preparation

CLOSE button/MSU-350 → "ON"...

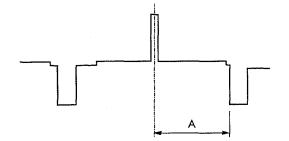
- Video signal select button/BVP-370P (rear panel) → "G"
- SAFETY ZONE switch/BVP-370P (rear panel) → "OFF"
- CENTER MARKER switch/BVP-370P (rear panel)
- CURSOR button/BVP-370P (rear panel) → "OFF

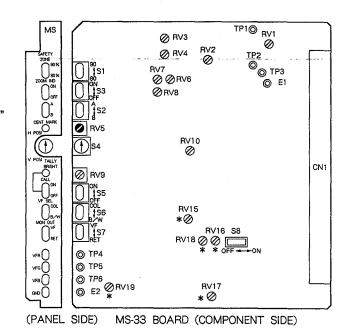
Test point:

TPA38 (GND;E1)/extension board

Adjusting point: Specification:

 \bigcirc RV5/MS-33 board A=27.7 \pm 0.5 μ s





Suffix -11; Serial No. Up to 40210

Suffix -12; Serial No. 40301 and higher

6-4. CURSOR ADJUSTMENT

Note: Be sure to complete the "6-3. CENTER MARKER ADJUSTMENT".

Oscilloscope, B/W monitor

To be extended: MS-33 board

Preparation

- CLOSE button/MSU-350→"ON"
- Video signal select button/BVP-370P (rear panel) → "G"
- SAFETY ZONE switch/BVP-370P (rear panel) → "OFF"
- CENTER MARKER switch/BVP-370P (rear panel)

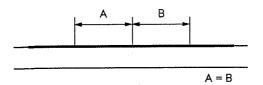
CURSOR button/BVP-370P (rear panel) → "ON"

Adjustment Procedure

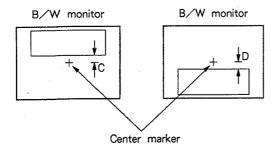
1. Adjust control knobs/(BVP-370P, rear panel) as follows.

Control knob (rear panel)	Test point (EXT. BOARD)	Specification
V-POSI	TPA10 (GND;E1)	+2.5 Vdc
HEIGHT	TPB10 (GND;E1)	+2.5 Vdc

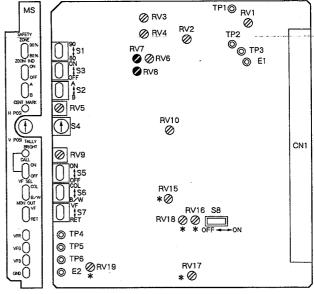
2. Test point: TPA38 (GND;E1)/extension board. Adjust below.



- 3. HEIGHT control knob → fully clockwise ○
- 4. Adjust @ RV8/MS-33 board so that C and D in figure below are equal when V-POSI control knob fully turns clockwise and counterclockwise.



5. Perform procedure 1 again.



MS-33 BOARD (COMPONENT SIDE) (PANEL SIDE)

MS-33 board with a suffix of -12.

Suffix -11; Serial No. Up to 40210

Suffix -12; Serial No. 40301 and higher

Note: After the adjustment, set switch and button as follows.

- CENTER MARKER switch/BVP-370P (rear panel) → "OFF"
- CURSOR button/BVP-370P (rear panel) → "OFF"



6-5. VF R/G/B LEVEL ADJUSTMENT

Note: Make sure that the adjustment of "STEP 1. POWER SUPPLY SYSTEM ADJUSTMENT" through "STEP 4. DETAIL SIGNAL SYSTEM ADJUSTMENT" must be done.

Equipment:

Oscilloscope

To be extended:

MS-33 board

Preparation

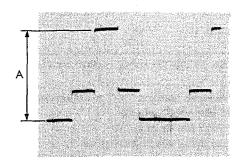
TEST 2 button/MSU-350 → "ON"

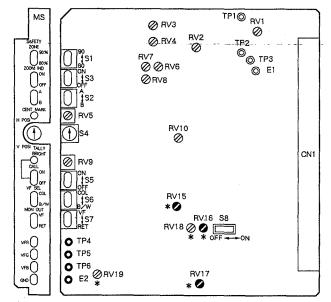
Adjustment Procedures

• Perform adjustment in order of G, R and B with the video signal select button.

MS-33 board (GND;E2)

	Test point	Adj. point	Specification
G-ch	TP5	⊘ RV16	
R-ch	TP4	⊘ RV15	A=700 ± 10 mVp-p
B-ch	TP6	⊘ RV17	





(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

Suffix –11; Serial No. Up to 40210 Suffix –12; Serial No. 40301 and higher

6-6. RETURN VIDEO LEVEL ADJUSTMENT

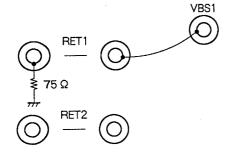
Equipment:

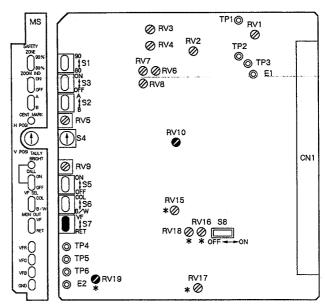
Oscilloscope

To be extended: MS-33 board

Preparation

- BARS button/MSU-350 → "ON"
- RET1 button/BVP-370P (rear panel) → "ON"
- S7 (MONITOR SELECT)/MS-33 board → "RET"
- Connect between RET1 and VBS1 connection with a BNC cable on CCU-370P rear panel.



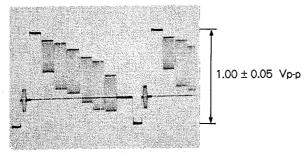


(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

Suffix -12; Serial No. 40301 and higher

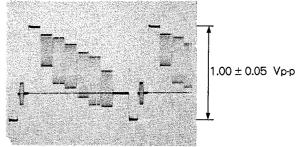
Serial No. Up to 40210

Adjustment Procedures

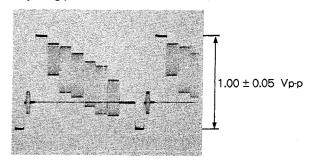


Serial No. 40301 and higher

Adjustment Procedures



2. Test point: TPA38 (GND;E1)/extension board Adjusting point: **⊘** RV19/MS-33 board



Note: After the adjustment, set switch as follows.

• S7 (MONITOR SELECT)/MS-33 board → "VF"

STEP 7. TRIAX INTERFACE SYSTEM ADJUSTMENT

7-1. MD-67 BOARD +5V ADJUSTMENT

Note: This adjustment influences operation of the MD-67 board.

Therefore, when this adjustment is carried out, all of following adjustments in TRIAX INTERFACE SYSTEM

ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Equipment: --

Digital voltmeter

To be extended:

MD-67 board

Test point:

TP2 (GND;E1)/MD-67 board

Adjusting point:

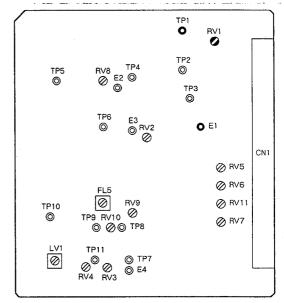
RV1/MD-67 board

Specification:

 $+5.0\pm0.02\,\mathrm{Vdc}$

Adjustment Procedures

 Perform adjustment when measured voltage is more than ± 1% with respect to the specified voltage.



MD-67 BOARD (COMPONENT SIDE)

FL-89 BOARD +9V ADJUSTMENT

Note: This adjustment influences operation of the FL-89 board.

Therefore, when this adjustment is carried out, all of following adjustments in TRIAX INTERFACE SYSTEM ADJUSTMENT must be confirmed.

Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.

Equipment:

Digital voltmeter

To be extended: FL-89 board

Test point:

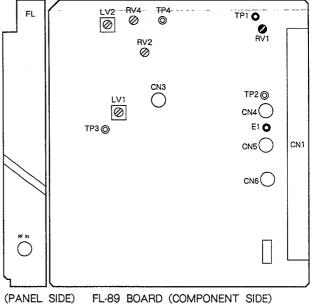
TP1 (GND;E1)/FL-89 board

Adjusting point: Specification:

 $+9.0 \pm 0.02 \, \mathrm{Vdc}$

Adjustment Procedures

• Perform adjustment when measured voltage is more than \pm 1% with respect to the specified voltage.



7-3. 36 MHz FREQUENCY ADJUSTMENT

Note: Before adjustment, allow for more than 10 minutes warm-up time.

Equipment:

Frequency counter

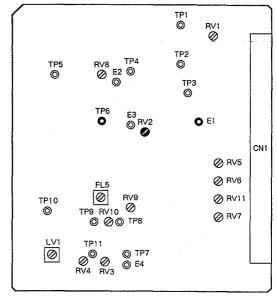
To be extended:

MD-67 board

Test point: Adjusting point: TP6 (GND;E1)/MD-67 board

Specification:

36,000,000 ± 10 Hz



MD-67 BOARD (COMPONENT SIDE)

7-4. YREF LEVEL ADJUSTMENT

Note: Make sure that the adjustment of "STEP 1. POWER SUPPLY SYSTEM ADJUSTMENT" through "STEP 5. AUTO CONTROL SYSTEM ADJUSTMENT" must be done.

Equipment:

Oscilloscope

To be extended: MD-67 board

Preparation.

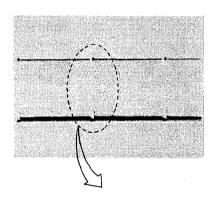
· Button switch of MSU-350 must be set the initial setting, and set the buttons as follows.

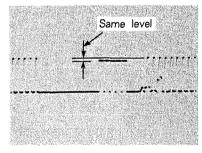
TEST 1 button/MSU-350 → "ON"

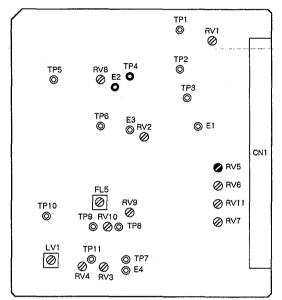
KNEE OFF button/MSU-350 → "ON" (light up)

Test point:

TP4 (GND;E2)/MD-67 board







MD-67 BOARD (COMPONENT SIDE)

7-5. Y CARRIER BALANCE ADJUSTMENT

Note: Make sure that the adjustment of "STEP 1. POWER SUPPLY SYSTEM ADJUSTMENT" through "STEP 5. AUTO CONTROL SYSTEM ADJUSTMENT" must be done.

Equipment:

Oscilloscope (DC mode)

To be extended:

MD-67 board

Preparation

 Button switch of MSU-350 must be set the initial setting, and set the buttons as follows.

TEST 1 button/MSU-350 → "ON"

KNEE OFF button/MSU-350 → "ON" (light up)

Test point:

TP4 (GND;E2)/MD-67 board

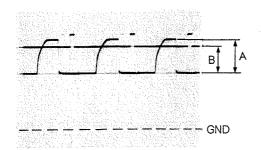
IC2-pin4 (GND;E2)/MD-67 board

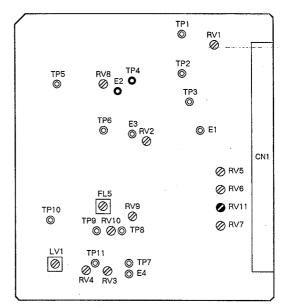
Adjusting point:

RV11/MD-67 board

Adjustment Procedures

- 1. Connect a CH-1 probe of oscilloscope to TP4 and a CH-2 probe of oscilloscope to IC2-pin 4.
- 2. Select the same input VOLTS/DIV on both channels (CH-1, CH-2), and adjust the ground level to the same position, close to the bottom of the screen.
- 3. Observe TP4 (GND;E2) and measure the value of A as shown below.
- Adjust ○ RV11 so that the DC level at IC2-pin 4, B is 80 ± 10% of A.





MD-67 BOARD (COMPONENT SIDE)

7-6. Y DC BALANCE ADJUSTMENT

Equipment:

Oscilloscope

To be extended: MD-67 board

Preparation

• CLOSE button/MSU-350 → "ON"

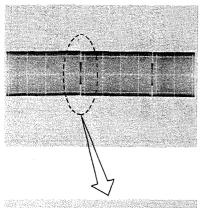
Test point:

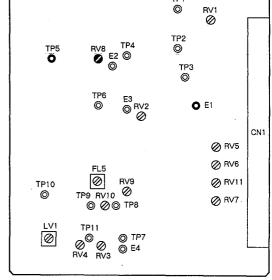
TP5 (GND;E1)/MD-67 board

Adjusting point: RV8/MD-67-board

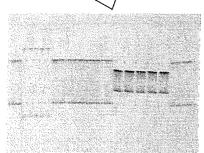
Adjustment Procedures

• Adjust PV8 so that the waveform at TP5 is flat in V BLKG period.

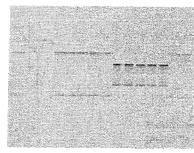




MD-67 BOARD (COMPONENT SIDE)







Flat waveform

7-7. R-Y REF LEVEL ADJUSTMENT

Equipment:

Oscilloscope

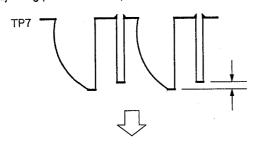
To be extended:

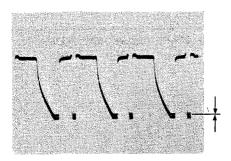
MD-67 board

Preparation

- TEST 1 button/MSU-350 → "ON"
- S1 (R ON/OFF)/SG-167P board → "OFF"

Adjustment Procedures





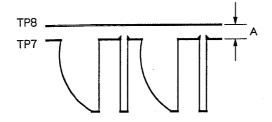
2. Test point: TP8 (GND;E4)/MD-67 board

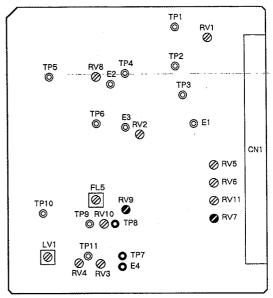
TP7 (GND;E4)/MD-67 board

Adjusting point:

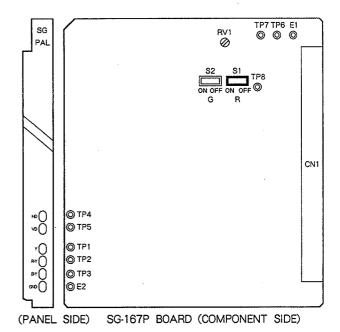
RV9 (R-Y CAR BAL)/MD-67 board

Specification: A=0 mVdc





MD-67 BOARD (COMPONENT SIDE)



Note: After the adjustment, set button and switch as follows.

TEST 1 button/MSU-350→"OFF"

S1 (R ON/OFF)/SG-167P board→"ON"

7-8. B-Y REF LEVEL ADJUSTMENT

Equipment:

Oscilloscope

To be extended:

MD-67 board

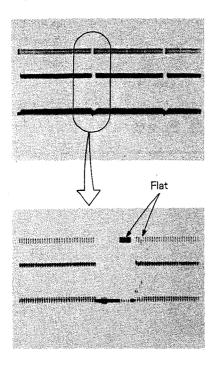
Preparation

TEST 1 button/MSU-350→"ON"

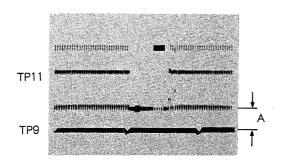
- S1 (R ON/OFF)/SG-167P board → "OFF"
- S2 (G ON/OFF)/SG-167P board → "OFF"

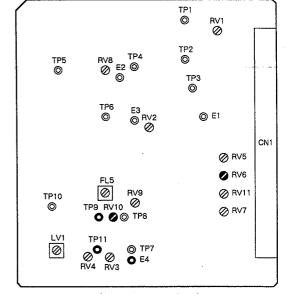
Adjustment Procedures

1. Test point: TP11 (GND;E4)/MD-67 board Adjusting point: RV6 (B-Y REF LEV)/MD-67 board

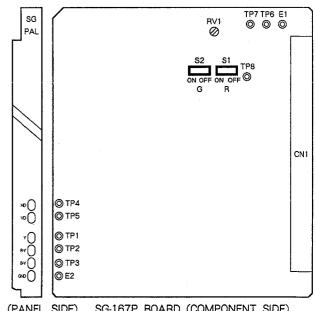


2. Test point: TP11 (GND;E4)/MD-67 board TP9 (GND;E4)/MD-67 board Adjusting point: RV10 (B-Y CAR BAL)/MD-67 board Specification: A=0 mVdc





MD-67 BOARD (COMPONENT SIDE)



(PANEL SIDE) SG-167P BOARD (COMPONENT SIDE)

Note: After the adjustment, set button and switch as follows. TEST 1 button/MSU-350 → "OFF" S1 (R ON/OFF)/SG-167P board → "ON" S2 (G ON/OFF)/SG-167P board → "ON"

7-11. 72 MHz TRAP ADJUSTMENT

Note: Perform the adjustment only when changing a part.

Equipment: To be extended: MD-67 board

Spectrum analyzer

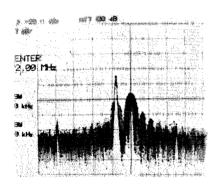
Preparation

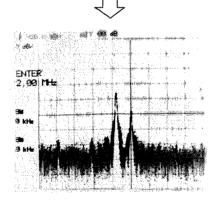
CLOSE button/MSU-350 → "ON"

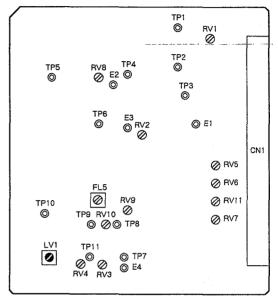
Adjustment Procedure

• Adjust O LV1/MD-67 board so that the 72 MHz frequency at TPA23 (GND;TPB23) on the MD-67 board is minimum.

CENTER FREQ. 72 MHz 5 MHz **SPAN**







MD-67 BOARD (COMPONENT SIDE)

7-12. RETURN VIDEO FREQUENCY ADJUSTMENT (1)

Note: Perform the adjustment only when changing a part.

When adjusting this step, the length of triaxial cable cable is required 600-1000m.

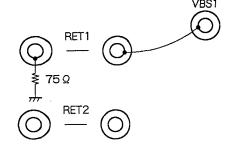
Equipment: Oscilloscope **To be extended**: FL-89 board

Preparation

• CLOSE button/MSU-350 → "ON"

RET 1 button/BVP-370P (rear panel) → "ON"

• Connect between RET1 and VBS1 connector with a BNC cable on CCU-370P rear panel.



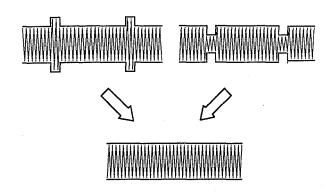
Test point:

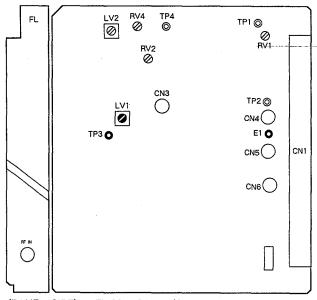
TP3 (GND;E1)/FL-89 board

Adjusting point: **OLV1/FL-89** board

Adjustment Procedures

· Adjust the waveform level at TP3 for flat.





(PANEL SIDE) FL-89 BOARD (COMPONENT SIDE)

8-4. INCOM 1 DEVIATION ADJUSTMENT

Equipment:

Spectrum analyzer, Oscilloscope,

Audio generator

To be extended:

AU-129P board

Preparation

• MIC (PROD/OFF/ENG) switch

/BVP-370P (rear panel) → "ENG"

Test point:

TP10 (GND;E2)/AU-129P board

Adjusting point:

Specification:

 $T{=}20.0\pm0.5~kHz$

Adjustment Procedures

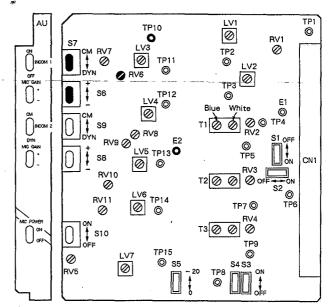
 S6 (MIC GAIN)/AU-129P board → "0" S7 (INCOM 1)/AU-129P board → "CM"

2. Feed the following signal to TPA35 (X) and TPA37 (GND) on the extension board. ...Fig. 1 (Refer to 5-1-2. audio connection)

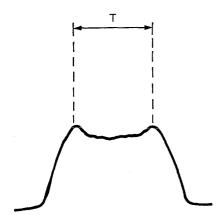
Signal: Sine wave Frequency: 1 kHz Output level: 220 mVp-p

3. Connect a probe of spectrum analyzer to TP10, and

adjust \bigcirc RV6 so that T is 20.0 \pm 0.5 kHz.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



CENT FREQ: 7.1 MHz FREQ SPAN: 50 kHz

8-5. INCOM 2 DEVIATION ADJUSTMENT

Equipment: Spectrum analyzer, Oscilloscope,

Audio generator

To be extended: AU-129P board

Preparation

• MIC (PROD/OFF/ENG) switch

/BVP-370P (rear panel) → "PROD"

Test point:

TP10 (GND;E2)/AU-129P board

Adjusting point: RV8 (INCOM 2 DEV)/AU-129P board

Specification:

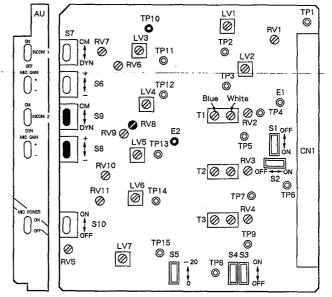
 $T=20.0 \pm 0.5 \text{ kHz}$

Adjustment Procedures

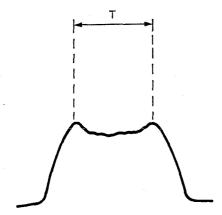
- 1. S8 (MIC GAIN)/AU-129P board → "0" S9 (INCOM 2)/AU-129P board → "CM"
- 2. Feed the following signal to TPA36 (X) and TPA37 (GND) on the extension board. ...Fig. 1 (Refer to 5-1-2. audio connection)

Signal: Sine wave Frequency: 1 kHz Output level: 220 mVp-p

3. Connect a probe of spectrum analyzer to TP10, and adjust RV8 so that T is 20.0 ± 0.5 kHz.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



CENT FREQ: 7.4 MHz FREQ SPAN: 50 kHz

8-6. MIC 1 DEVIATION ADJUSTMENT

Equipment:

Spectrum analyzer, Oscilloscope,

Audio generator

To be extended:

AU-129P board

Preparation

S51 switch/AT-55B board (CCU-370P) → "NORMAL"

• \$55 (REMOTE/LOCAL) switch

/AT-55B board (CCU-370P) → "LOCAL"

Test point:
Adjusting point:

TP10 (GND;E2)/AU-129P board

RV10 (MIC 1 DEV)/AU-129P board

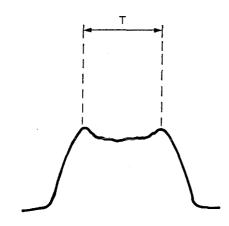
Specification: $T=16.0 \pm 0.5 \text{ kHz}$

Adjustment Procedures

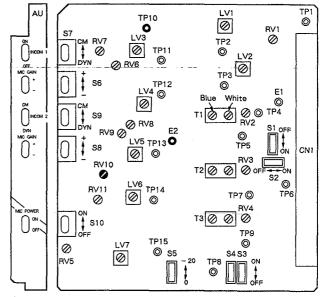
 Input the 1 kHz sine-wave signal to TPB15 (X), TPA16 (Y) and TPB17 (GND) on the extension board/AU-129P board. ...Fig. 2 (Refer to 5-1-2. audio connection)

2. Connect a probe of oscilloscope to portion ⓐ as shown below, and adjust the level control of audio generator so that the audio level at its point is 270 mVp-p.

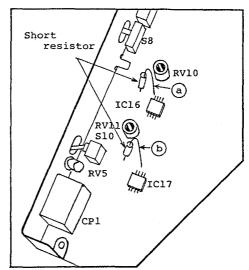
3. Connect a probe of spectrum analyzer to TP10, and adjust \bigcirc RV10 so that T is 16.0 \pm 0.5 kHz.



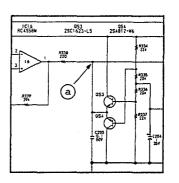
CENT FREQ: 6.0 MHz FREQ SPAN: 30 kHz



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AU-129P BOARD/BVP-370P



8-7. MIC 2 DEVIATION ADJUSTMENT

Equipment:

Spectrum analyzer, Oscilloscope,

Audio generator

To be extended: AU-129P board

Preparation

S52 switch/AT-55B board (CCU-370P) → "NORMAL"

\$55 (REMOTE/LOCAL)switch

/AT-55B board (CCU-370P) → "LOCAL"

Test point:

TP10 (GND;E2)/AU-129P board

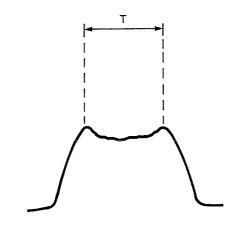
Adjusting point:

RV11 (MIC 2 DEV)/AU-129P board

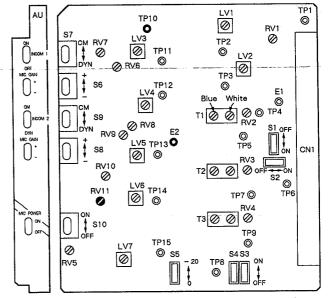
 $T=18.0 \pm 0.5 \text{ kHz}$ Specification:

Adjustment Procedures

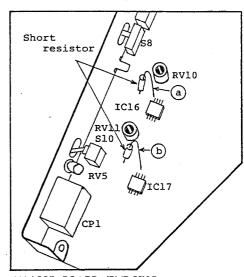
- 1. Input the 1 kHz sine-wave signal to TPB16 (X), TPA17 (Y) and TPB17 (GND) on the extension board/AU-129P board. ...Fig. 2 (Refer to 5-1-2. audio connection)
- 2. Connect a probe of oscilloscope to portion (b) as shown below, and adjust the level control of audio generator so that the audio level at its point is 270 mVp-p.
- 3. Connect a probe of spectrum analyzer to TP10, and adjust \bigcirc RV11 so that T is 18.0 \pm 0.5 kHz.



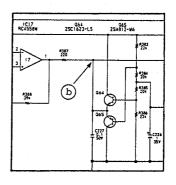
CENT FREQ: 6.7 MHz FREQ SPAN: 50 kHz



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AU-129P BOARD/BVP-370P



8-8. INCOM 1 SIDE TONE ADJUSTMENT

Equipment:

Oscilloscope, Audio generator

To be extended:

AU-129P board

Preparation

• MIC (PROD/OFF/ENG) switch

/BVP-370P (rear panel) → "ENG"

QRV7/AU-129P board → fully clockwise ○

Test point:

TPA29 (GND;E1)/extension board

Adjusting point:

Adjustment Procedures

 S6 (MIC GAIN)/AU-129P board → "0" S7 (INCOM 1)/AU-129P board → "CM"

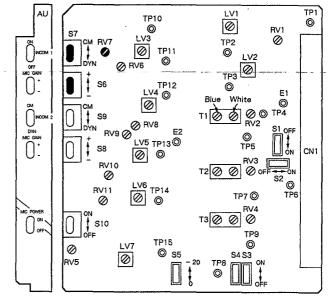
2. Feed the following signal to TPA35 (x) and TPA37 (GND) on the extension board. ...Fig. 1 (Refer to 5-1-2. audio connection)

Signal: Sine wave Frequency: 1 kHz

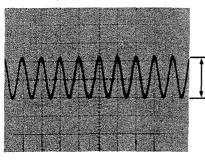
Output level: 220 mVp-p

 Adjust INCOM 1 control/BVP-370P (rear panel) so that a level on the TPA29 (GND;E1)/extension board is 2.2 Vp-p.

Adjust RV7/AU-129P board so that a level on TPA29 (GND;E1)/extension board is 220 mVp-p.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



 $220 \pm 10 \text{ mVp-p}$

INCOM 1 DEMOD. ADJUSTMENT

Note: Perform the adjustment only when replacing a part.

Equipment:

Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

MIC (PROD/OFF/ENG) switch

/BVP-370P (rear panel) → "ENG"

- Extend AT-55B board/CCU-370P with extension board.
- INCOM (PROD/PRIV/ENG) switch

/CCU-370P (front panel) → "ENG"

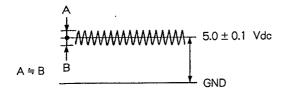
Test point:

TP7 (GND;E1)/AU-129P board

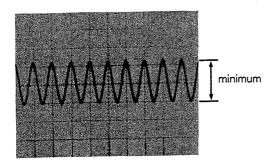
Adjusting point:

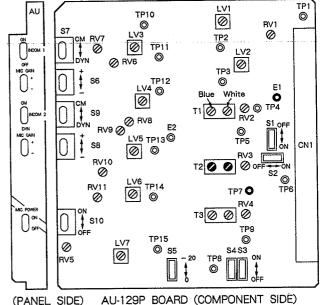
Adjustment Procedures

- 1. Input the 1 kHz sine-wave signal to CN2-TPB22 (X), TPA22 (Y) and TPB21 (GND) on the extension board/AT-55B board. ...Fig. 2 (Refer to 5-1-2. audio connection)
- 2. Adjust the level control of audio generator so that the audio level at TP27 (GND;E1)/AT-55B board is 200 mVp-p.
- 3. Connect a probe of oscilloscope to TP7/AU-129P board.
- Adjust a white core of T2/AU-129P board slowly, and the sine-wave appears near 5.0 Vdc, and then readjust it so that A and B on the 5.0 Vdc are nearly equal.

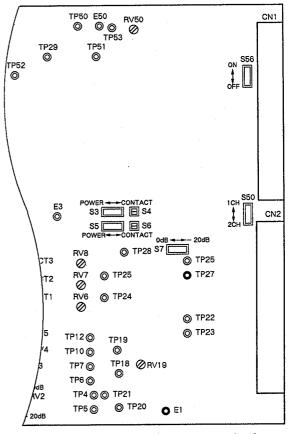


5. Set the input AC/DC mode on the oscilloscope to "AC" mode, and adjust a blue core of 72/AU-129P board so that the sine-wave is minimum.





(PANEL SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

8-10. INCOM 1 LEVEL ADJUSTMENT

Equipment:

Oscilloscope, Audio generator

To be extended:

AU-129P board

Preparation

• MIC (PROD/OFF/ENG) switch

/BVP-370P (rear panel) → "ENG"

• Extend AT-55B board/CCU-370P with extension board.

INCOM (PROD/PRIV/ENG) switch

/CCU-370P (front panel) → "ENG"

Test point:

TP6 (GND;E1)/AU-129P board

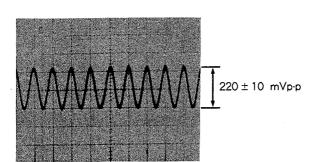
Adjustment Procedures

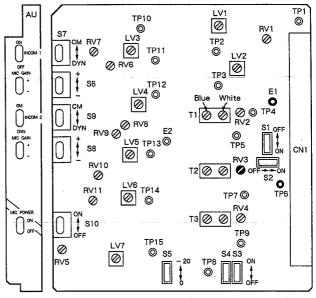
1. (For 4W intercom system)

 Input 1 kHz sine-wave signal to CN2-TPB22 (X), TPA22 (Y) and TPB21 (GND)/extension board.
 ...Fig. 2 (Refer to 4-1-3, audio connection)

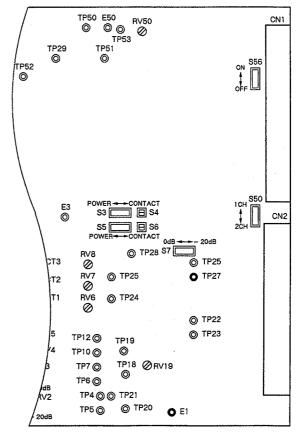
(For 2W intercorn system)

- Input 1 kHz sine-wave signal to CN2-TPA24 (x) and TPA23 (GND)/extension board. ...Fig. 1 (Refer to 4-1-3, audio connection)
- Adjust the level control of audio generator so that the audio level at TP27 (GND;E1)/AT-55B board is 200 mVp-p.
- 3. Adjust ⊘ RV3/AU-129P board so that a level on the TP6/AU-129P board is 220 mVp-p.





(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

8-11. INCOM 2 SIDE TONE ADJUSTMENT

Equipment:

Oscilloscope, Audio generator

To be extended:

AU-129P board

Preparation

MIC (PROD/OFF/ENG) switch

/BVP-370P (rear panel) → "PROD"

Test point:

TPB30 (GND;E1)/extension board

Adjustment Procedures

S8 (MIC GAIN)/AU-129P board → "0"
 S9 (INCOM 2)/AU-129P board → "CM"

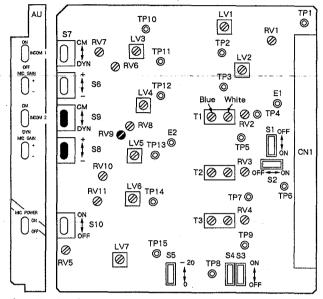
 Feed the following signal to TPB36 (X) and TPA37 (GND) on the extension board. ...Fig. 1 (Refer to 5-1-2. audio connection)

Signal: Sine wave Frequency: 1 kHz Output level: 220 mVp-p

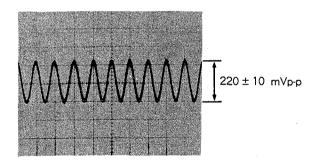
 Adjust INCOM 2 control/BVP-370P (rear panel) so that a level on the TPB30 (GND;E1)/extension board is 2.2 Vp-p.

4. Adjust

RV9/AU-129P board so that a level at TPB30 (GND;E1)/extension board is 220 mVp-p.



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



8-12. INCOM 2 DEMOD. ADJUSTMENT

Note: Perform the adjustment only when replacing a part.

Equipment:

Oscilloscope, Audio generator

To be extended:

AU-129P board

Preparation

MIC (PROD/OFF/ENG) switch

/BVP-370P (rear panel) → "PROD"

- Extend AT-55B board/CCU-370P with extension board.
- INCOM (PROD/PRIVE/ENG) switch

/CCU-370P (front panel) → "PROD"

Test point:

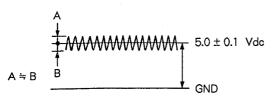
TP9 (GND;E1)/AU-129P board

Adjusting point:

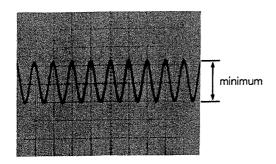
✓ T3/AU-129P board

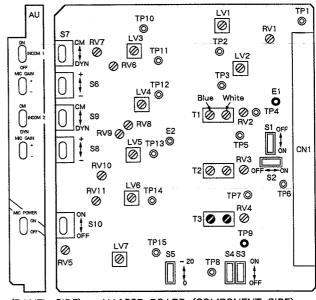
Adjustment Procedures

- 1. Input the 1 kHz sine-wave signal to CN2-TPB19 (X), TPA19 (Y) and TPB18 (GND) on the extension board/AT-55B board. ...Fig. 2 (Refer to 5-1-2. audio connection)
- 2. Adjust the level control of audio generator so that the audio level at TP23 (GND;E1)/AT-55B board is 200 mVp-p.
- 3. Connect a probe of oscilloscope to TP9/AU-129P board.
- 4. Adjust a white core of **⊘** T3/AU-129P board slowly, and the sine-wave appears near 5.0 Vdc, and then readjust it so that A and B on the 5.0 Vdc are nearly equal.

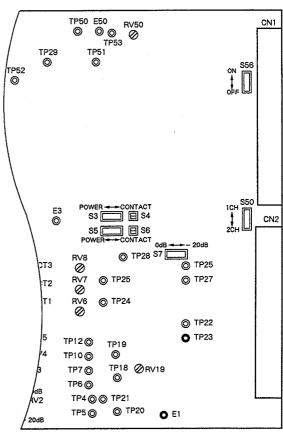


5. Set the input AC/DC mode on the oscilloscope to "AC" mode, and adjust a blue core of 73/AU-129P board so that the sine-wave is minimum.





(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

8-13. INCOM 2 LEVEL ADJUSTMENT

Equipment:

Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

• MIC (PROD/OFF/ENG) switch

/BVP-370P (rear panel) → "PROD"

• Extend AT-55B board/CCU-370P with extension board.

• INCOM (PROD/PRIV/ENG) switch

/CCU-370P (front panel) → "PROD"

Test point:

TP8 (GND;E1)/AU-129P board

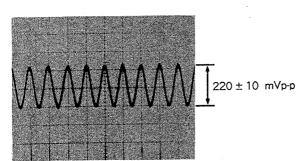
Adjusting point: RV4 (INCOM 2 LEV)/AU-129P board

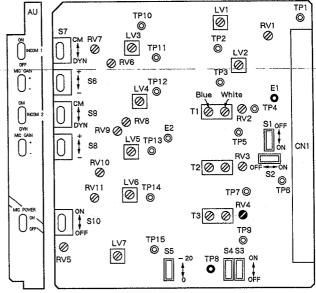
Adjustment Procedures

- 1. (For 4W intercom system)
 - Input 1 kHz sine-wave signal to CN2-TPB19 (X), TPA19 (Y) and TPB18 (GND)/extension board.
 ...Fig. 2 (Refer to 4-1-3. audio connection)

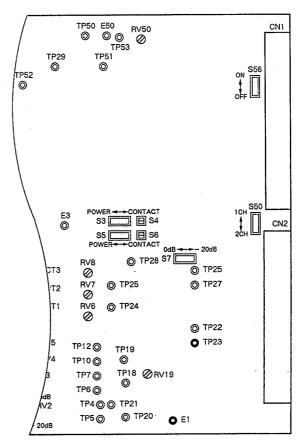
(For 2W intercom system)

- Input 1 kHz sine-wave signal to CN2-TPA21 (x) and TPA20 (GND)/extension board. ...Fig. 1 (Refer to 4-1-3. audio connection)
- Adjust the level control of audio generator so that the audio level at TP23 (GND;E1)/AT-55B board is 200 mVp-p.
- Adjust
 RV4/AU-129P board so that a level on the TP8/AU-129P board is 220 mVp-p.





(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

8-14. PGM DEMOD. ADJUSTMENT

Note: Perform the adjustment only when replacing a part.

Equipment:

Oscilloscope, Audio generator

To be extended:

AU-129P board

Preparation

Extended AT-55B board/CCU-370P with -extension board.

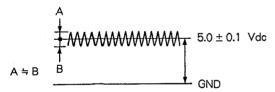
• S7 (0 dB/ - 20dB) switch/AT-55B board → "0 dB"

Test point: TP5 (GND;E1)/AU-129P board

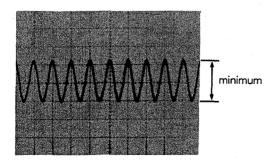
Adjusting point: T1/AU-129P board

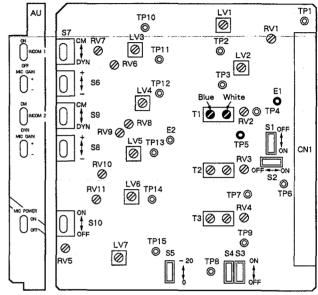
Adjustment Procedures

- 1. Input the 1 kHz sine-wave signal to CN2-TPB25 (X), TPA25 (Y) and TPB24 (GND) on the extension board/AT-55B board. ...Fig. 2 (Refer to 5-1-2. audio connection)
- 2. Adjust the level control of audio generator so that the audio level at TP28 (GND;E1)/AT-55B board is 200 mVp-p.
- Connect a probe of oscilloscope to TP5/AU-129P board.
- 4. Adjust a white core of T1/AU-129P board slowly, and the sine-wave appears near 5.0 Vdc, and then readjust it so that A and B on the 5.0 Vdc are nearly equal.

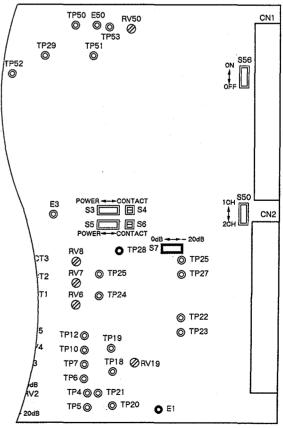


 Set the input AC/DC mode on the oscilloscope to "AC" mode, and adjust a blue core of ☐ T1/AU-129P board so that the sine-wave is minimum.





(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

8-15. PGM LEVEL ADJUSTMENT

Equipment: Oscilloscope, Audio generator

To be extended: AU-129P board

Preparation

• Extended AT-55B board/CCU-370P with extension board.

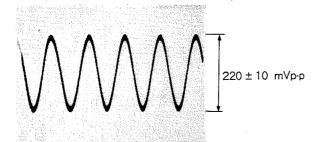
• S7 (0 dB/ − 20dB) switch/AT-55B board → "0 dB"

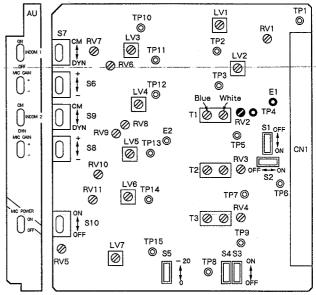
Test point: TP4 (GND;E1)/AU-129P board

Adjusting point: PRV2 (PGM LEV)/AU-129P board

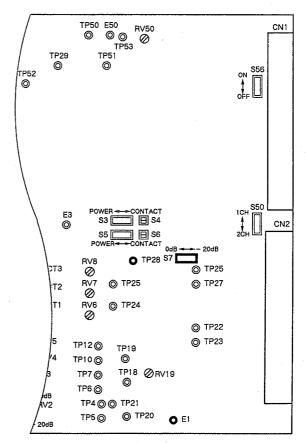
Adjustment Procedures

- Input the 1 kHz sine-wave signal to CN2-TPB25 (X), TPA25 (Y) and TPB24 (GND) on the extension board/AT-55B board. ...Fig. 2 (Refer to 5-1-2. audio connection)
- Adjust the level control of audio generator so that the audio level at TP28 (GND;E1)/AT-55B board is 200 mVp-p.
- Adjust
 RV2/AU-129P board so that a level on the TP4/AU-129P board is 220 mVp-p.





(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)



AT-55A/AT-55B BOARD (COMPONENT SIDE)

5-3. BOARD SWITCH SETTINGS AFTER FINISHING ADJUSTMENT

1. Switch setting

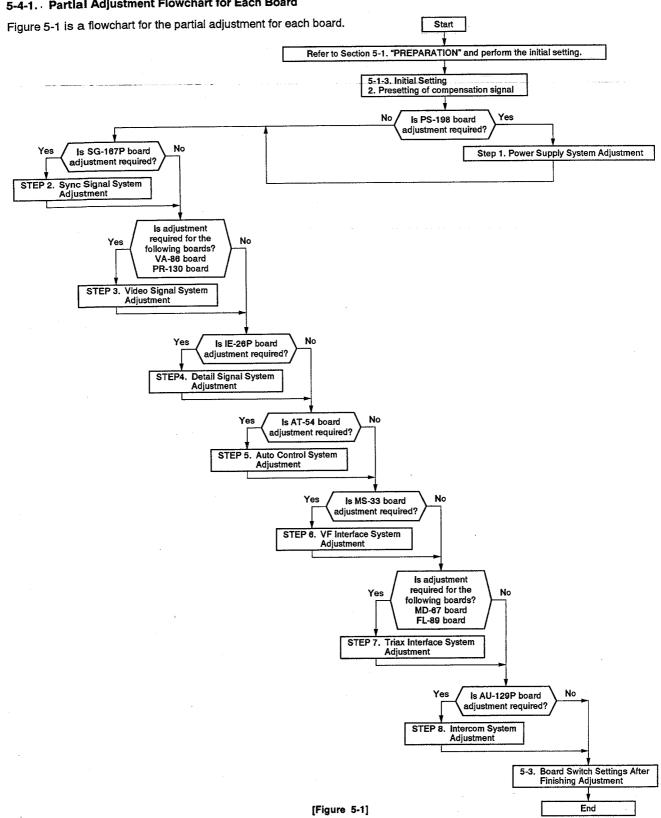
Check the board switch settings after the adjustment is completed. Switches whose setting position put in parenthesis can be set according to use. They are set to the position in parenthesis at the factory.

- ① VA-86 board S1 (FLARE) → "ON"
- ② IE-26P board S1 (SKIN SET) → OFF S2 (DTL ON/OFF) → (ON)
- ③ PR-130 board S1 (GAMMA ON/OFF) → ON
- MS-33 board
 S7 (MONITOR SELECT) → (VF)
- ⑤ SG-167P board S1 (R ON/OFF) → ON S2 (G ON/OFF) → ON
- ⑥ AT-54 board S1 (MODE) → F

- 2. Control setting
- ① IE-26P board
 ② RV31 (V DTL)
 → Adjust to your desired V detail level.
- ② PR-130 board
 Ø RV26 (DTL MIX) → Mechanical center
- AU-129P board
 RV5 (TRACKER LEVEL)
 This controls audio level.
 This is set fully clockwise at the factory, adjust to your desired audio level.
- MS-33 board
 PV18 (ZOOM IND) Serial No. 40301 and higher
 This controls brightness of Zoom Indicator.
 This is set to mechanical center at the factory, adjust to your preferred brightness.

5-4. PARTIAL ADJUSTMENT

5-4-1. Partial Adjustment Flowchart for Each Board



5-4-2. MAIN PARTIAL ADJUSTMENT ITEMS

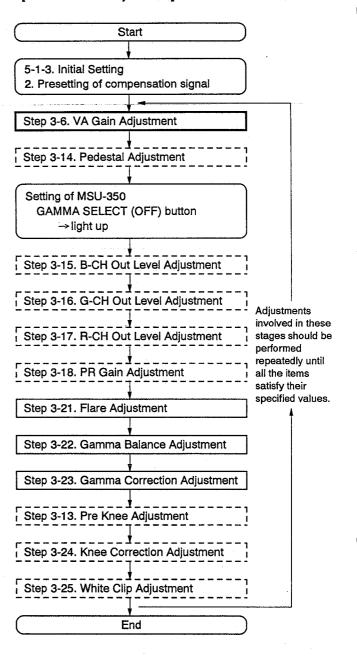
In this section, the main items most of ten requiring adjustment are identified.

When performing these adjustments, follow each flow chart completely from start to end.

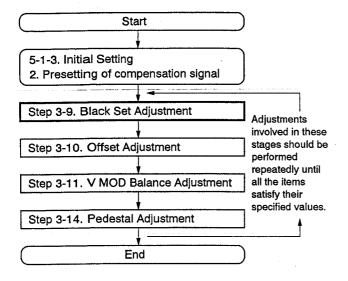
Note that it is not always necessary to adjust some items, and these are identified as follows;

-===	Main items
=	These adjustments must be performed with each main item.
 =	These items are to be checked, but only require adjustment if they do not meet their specifications.

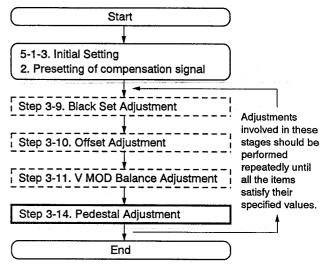
[White Balance Adjustment]



[Black Set Adjustment]



[Pedestal Adjustment]

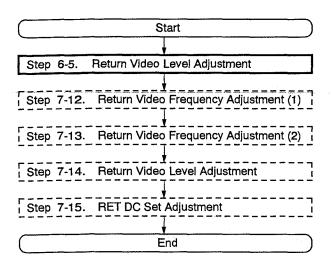


[Knee Correction Adjustment] [Gamma Correction Adjustment] Start Start 5-1-3. Initial Setting 5-1-3. Initial Setting 2. Presetting of compensation signal 2. Presetting of compensation signal Step 3-6. VA Gain Adjustment Step 3-6. VA Gain Adjustment Step 3-9. Black Set Adjustment Step 3-12. Test Signal Adjustment Step 3-13. Pre Knee Adjustment Step 3-10. Offset Adjustment Step 3-14. Pedestal Adjustment Step 3-11. V MOD Balance Adjustment Step 3-12. Test Signal Adjustment Step 3-15. B-CH Out Level Adjustment Adjustments involved in these Adjustments Step 3-16. G-CH Out Level Adjustment Step 3-14. Pedestal Adjustment stages should be involved in these performed stages should be repeatedly until performed Step 3-15. B-CH Out Level Adjustment Step 3-17. R-CH Out Level Adjustment all the items repeatedly until satisfy their all the items specified values. satisfy their Step 3-18. PR Gain Adjustment Step 3-16. G-CH Out Level Adjustment specified values. Step 3-17. R-CH Out Level Adjustment Step 3-22. Gamma Balance Adjustment Step 3-18. PR Gain Adjustment Step 3-23. Gamma Correction Adjustment Step 3-21. Flare Adjustment Step 3-24. Knee Correction Adjustment Step 3-22. Gamma Balance Adjustment Step 3-25. White Clip Adjustment

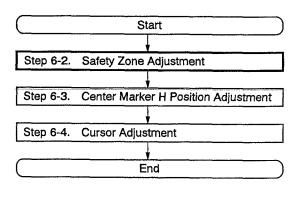
Step 3-23. Gamma Correction Adjustment

End

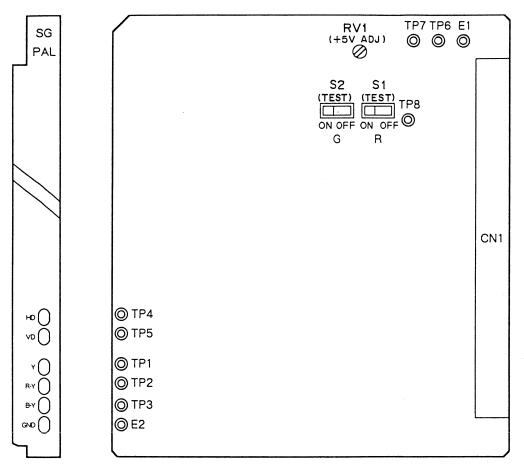
[Return Video Adjustment]



[Cursor Position Adjustment]



SG-167 BOARD

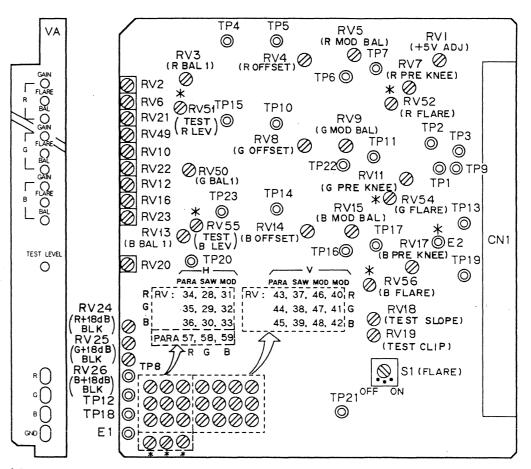


(PANEL SIDE) SG-167P BOARD (COMPONENT SIDE)

VA-86 BOARD

VA-86



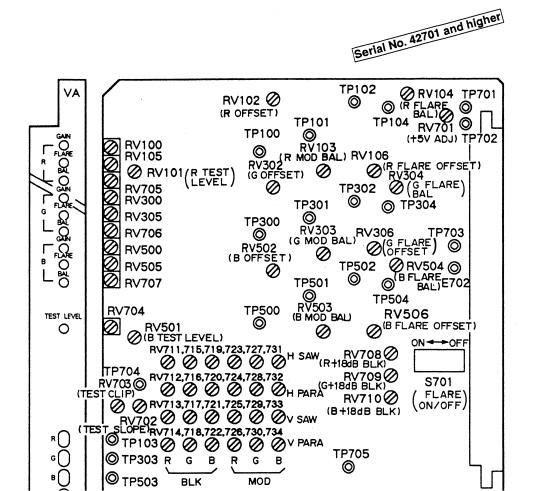


(PANEL SIDE) VA-86 BOARD (COMPONENT SIDE)

5-98 (a)

Suffix -11; Serial No. Up to 40300

Suffix -12; Serial No. 40301 to 42700



(PANEL SIDE) VA-131A BOARD (COMPONENT SIDE)

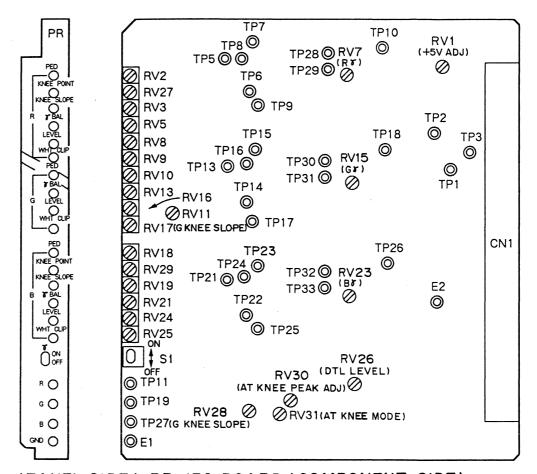
5-98 (b)

CN1

BVP-370P (AE)

© E701

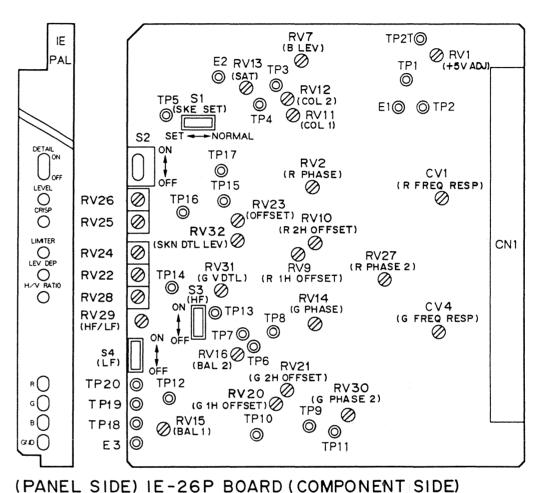
PR-130 BOARD



(PANEL SIDE) PR-130 BOARD (COMPONENT SIDE)

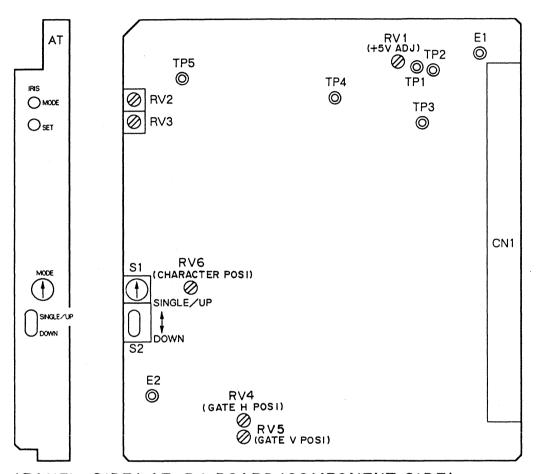
IE-26P IE-26P

IE-26P BOARD



5-100

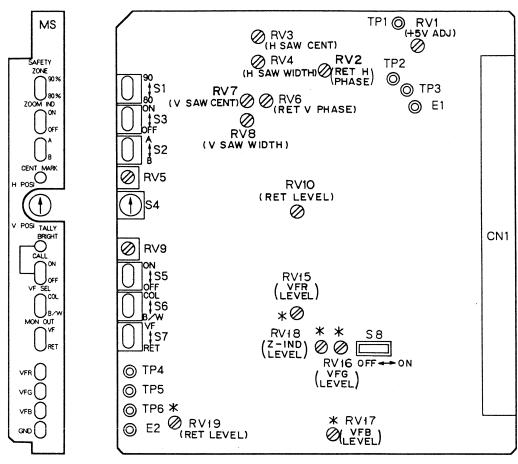
AT-54 BOARD



(PANEL SIDE) AT-54 BOARD (COMPONENT SIDE)

MS-33 MS-33

MS-33 BOARD



(PANEL SIDE) MS-33 BOARD (COMPONENT SIDE)

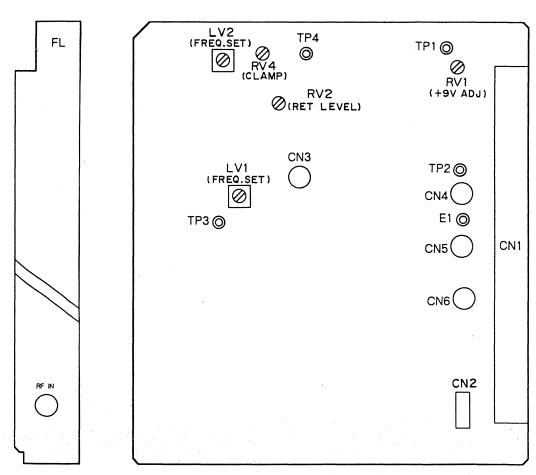
5-102

Suffix -11; Serial No. Up to 40210

Suffix –12; Serial No. 40301 and higher

BVP-370P (AE)

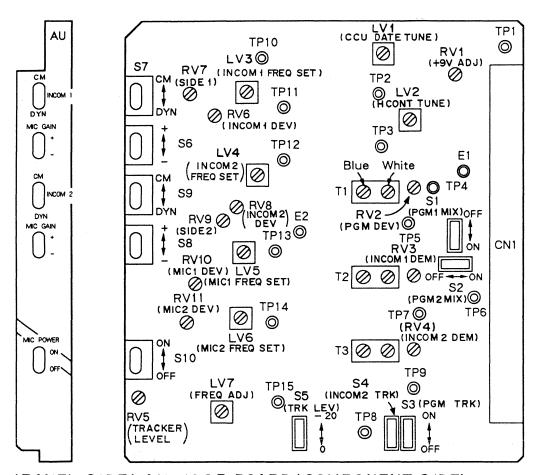
FL-89 BOARD



(PANEL SIDE) FL-89 BOARD (COMPONENT SIDE)

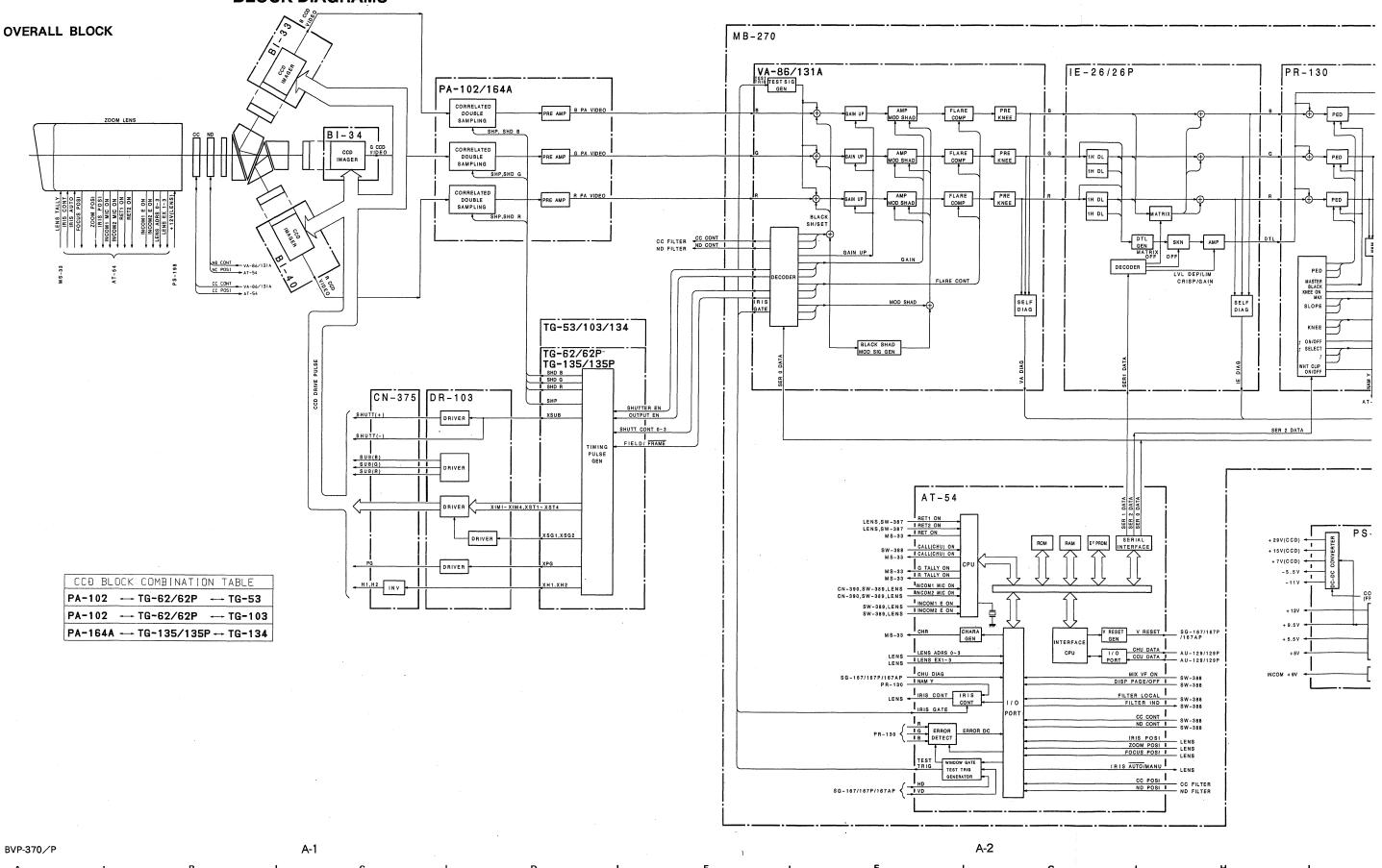
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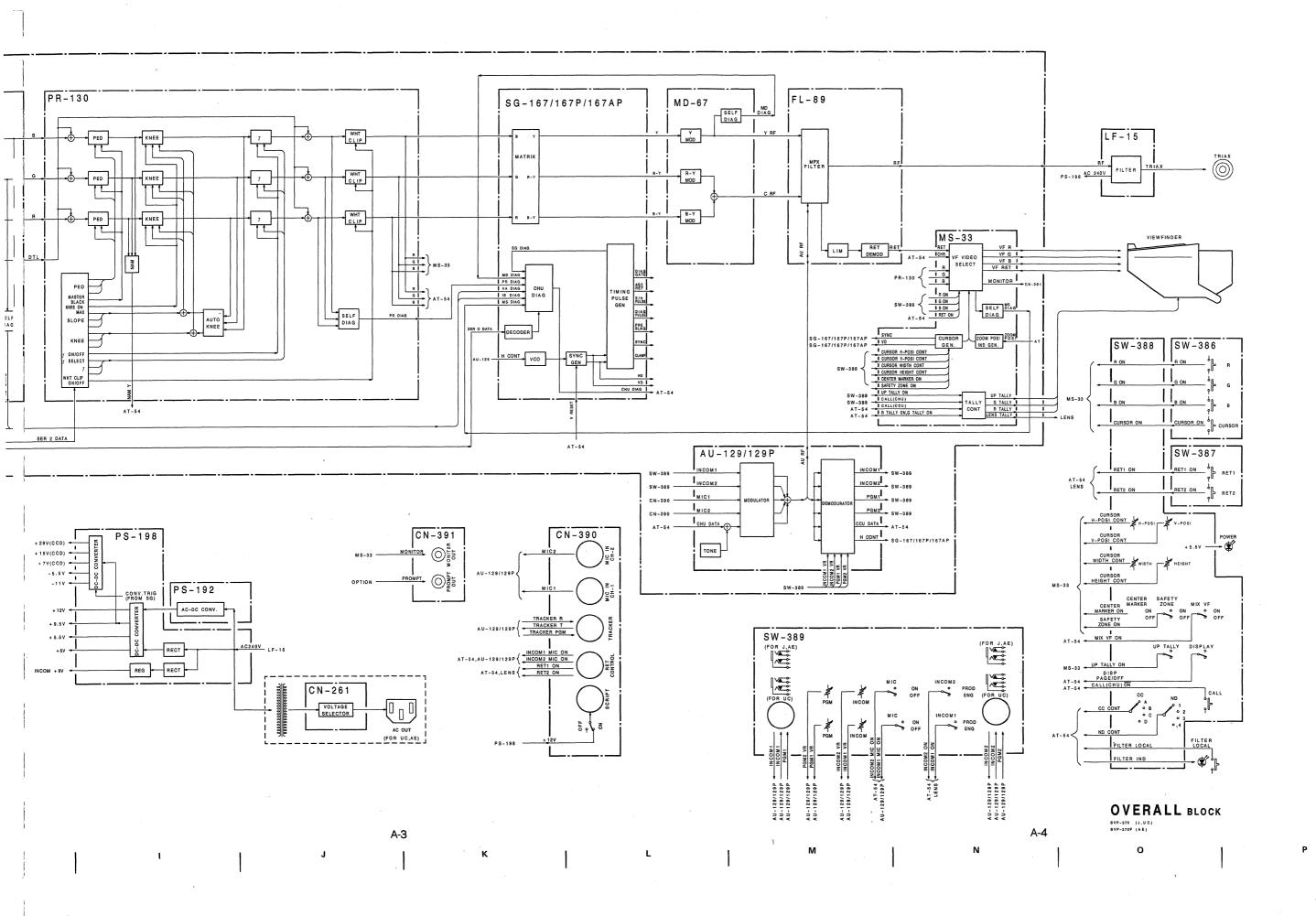
AU-129P BOARD



(PANEL SIDE) AU-129P BOARD (COMPONENT SIDE)

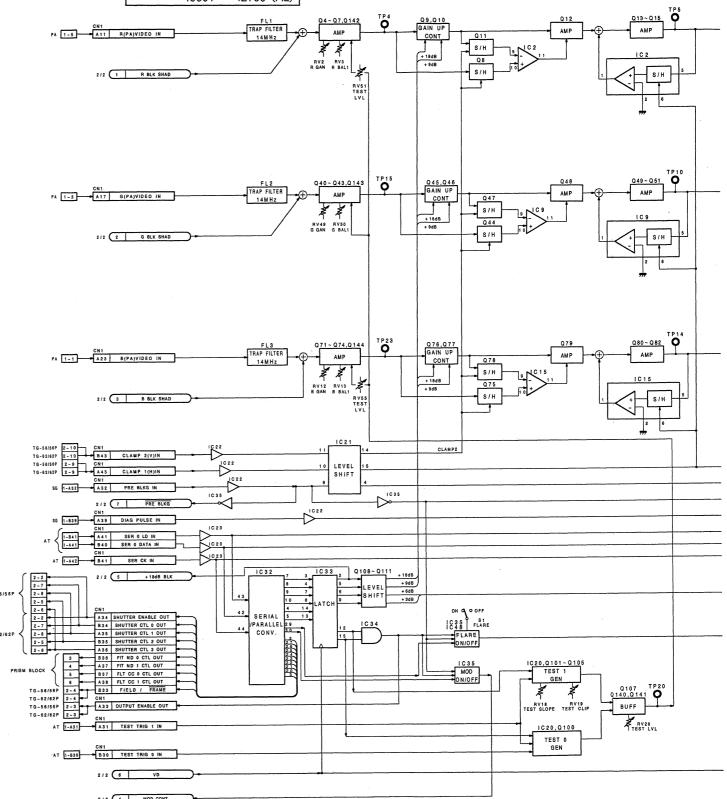
SECTION A BLOCK DIAGRAMS





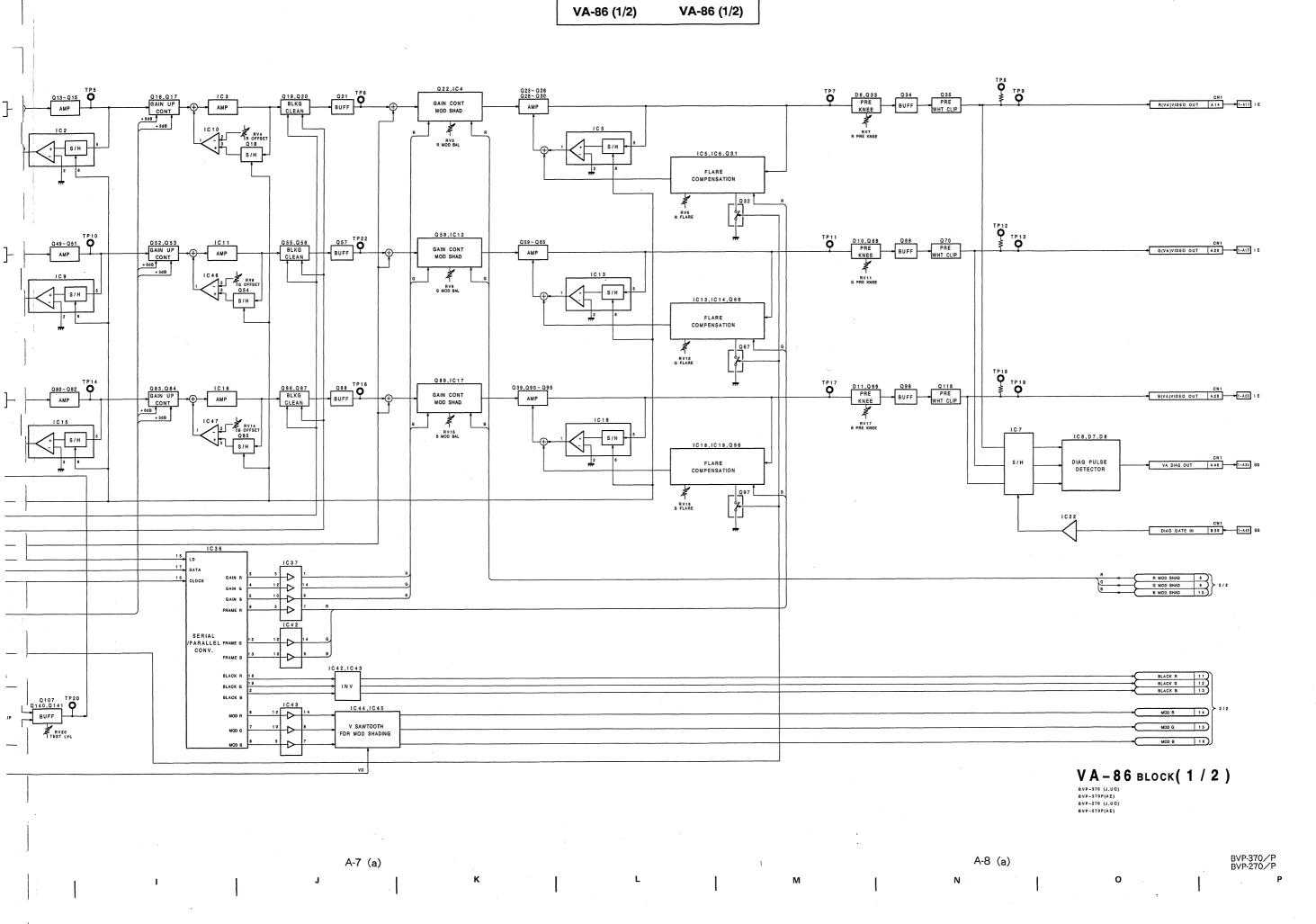
VA-86 BLOCK (1/2)

Serial No. 10001 - 12010 (UC) 30001 - 31300 (J) 40001 - 42700 (AE)



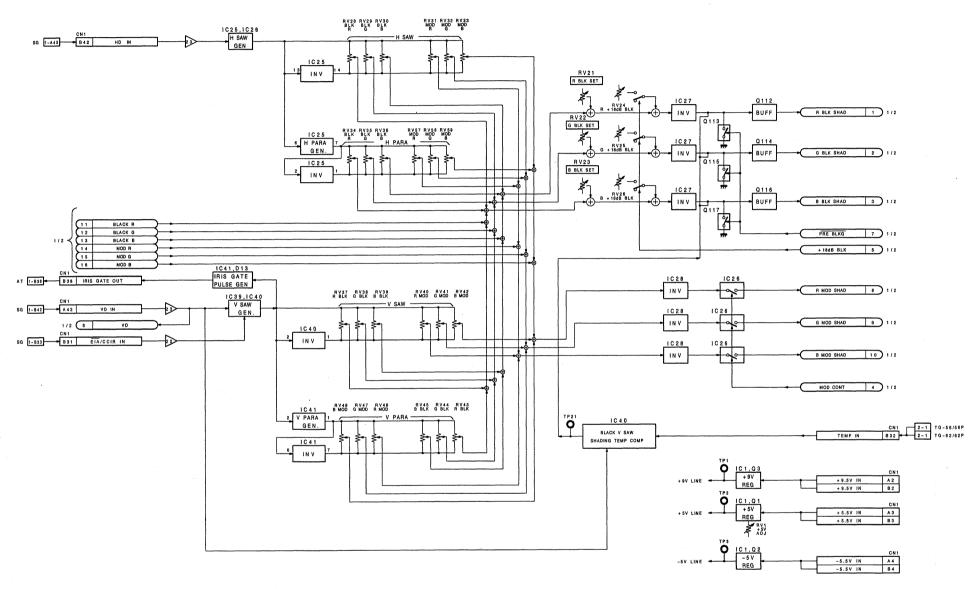
A-6 (a)

A-5 (a)



VA-86 BLOCK (2/2)

Serial No. 10001 - 12010 (UC) 30001 - 31300 (J) 40001 - 42700 (AE)



VA-86 BLOCK (2/2)

8VP-370 (J,UC)

8VP-270 (J,UC)

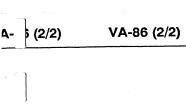
8VP-270 (A,E)

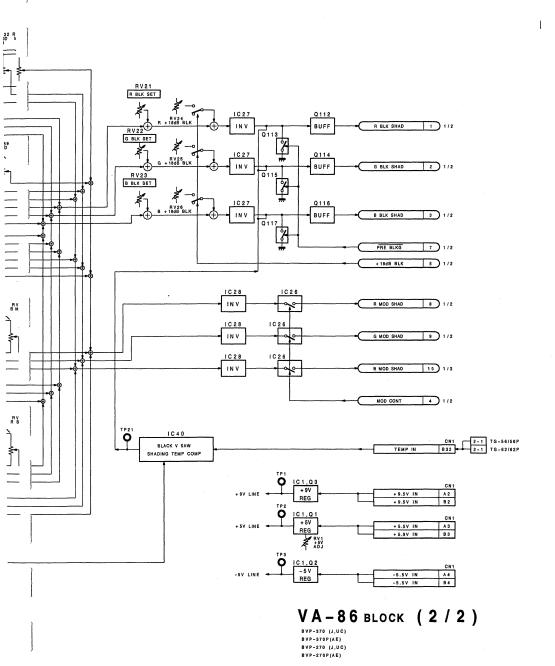
8VP-270 (A,E)

A-10

A-9

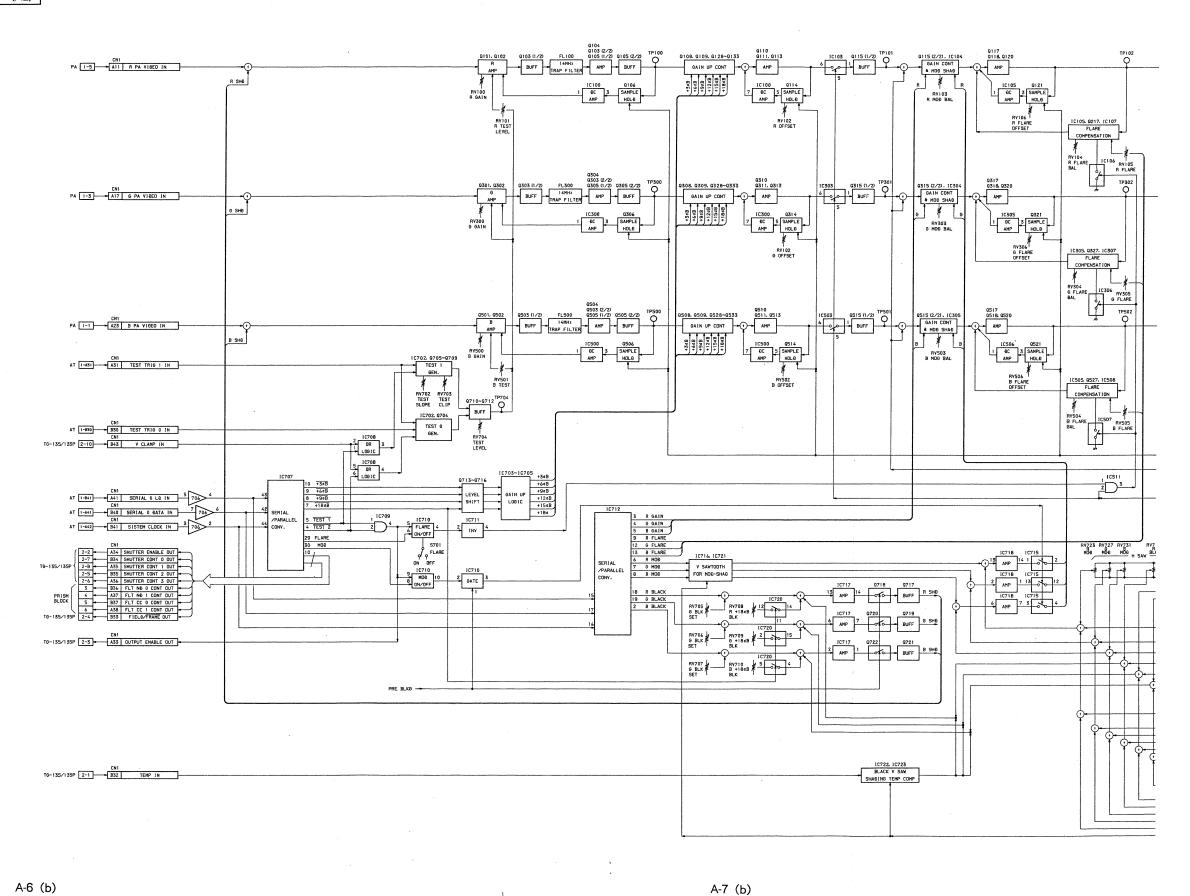
BVP-370/P BVP-270/P

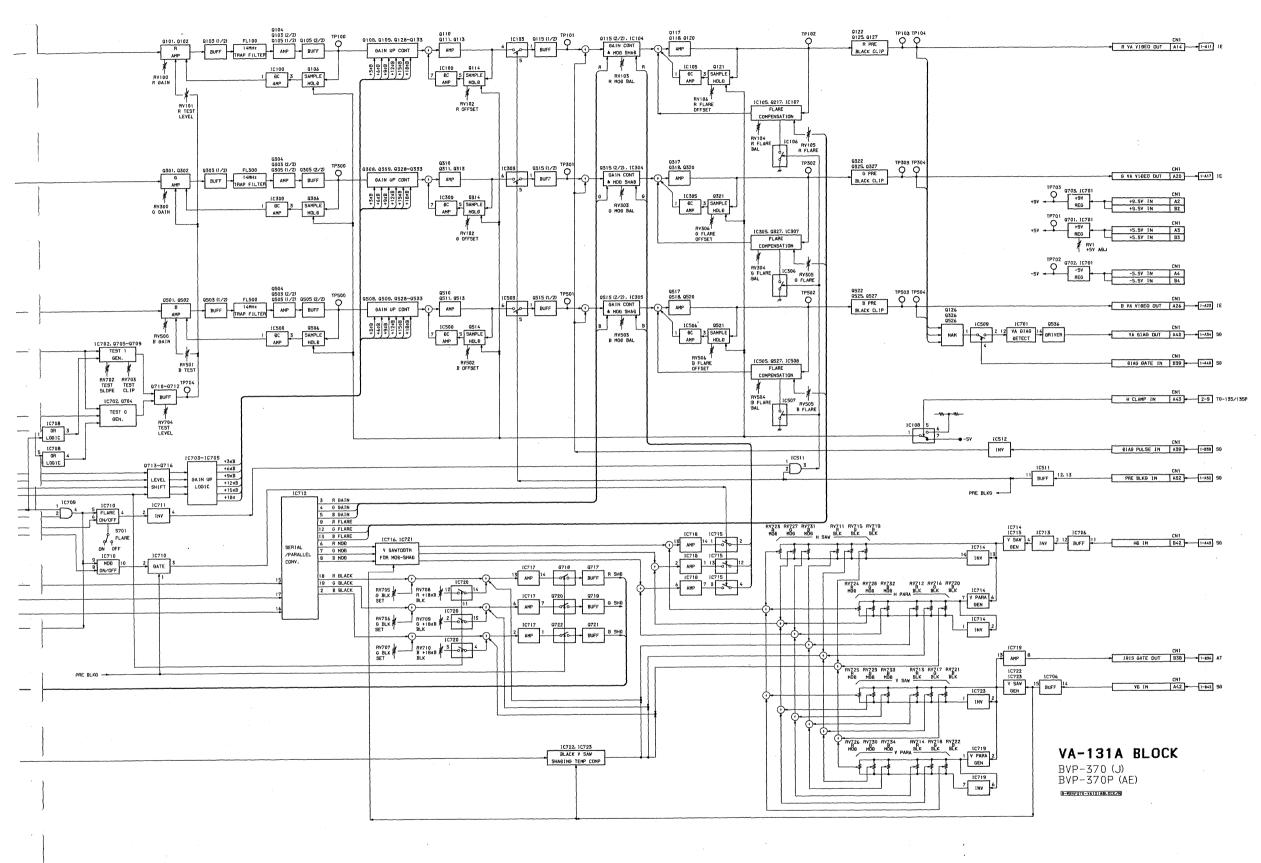




VA-131A BLOCK

Serial No. 31301 - (J) 42701 - (AE)





A-7 (b)

A-8 (b)

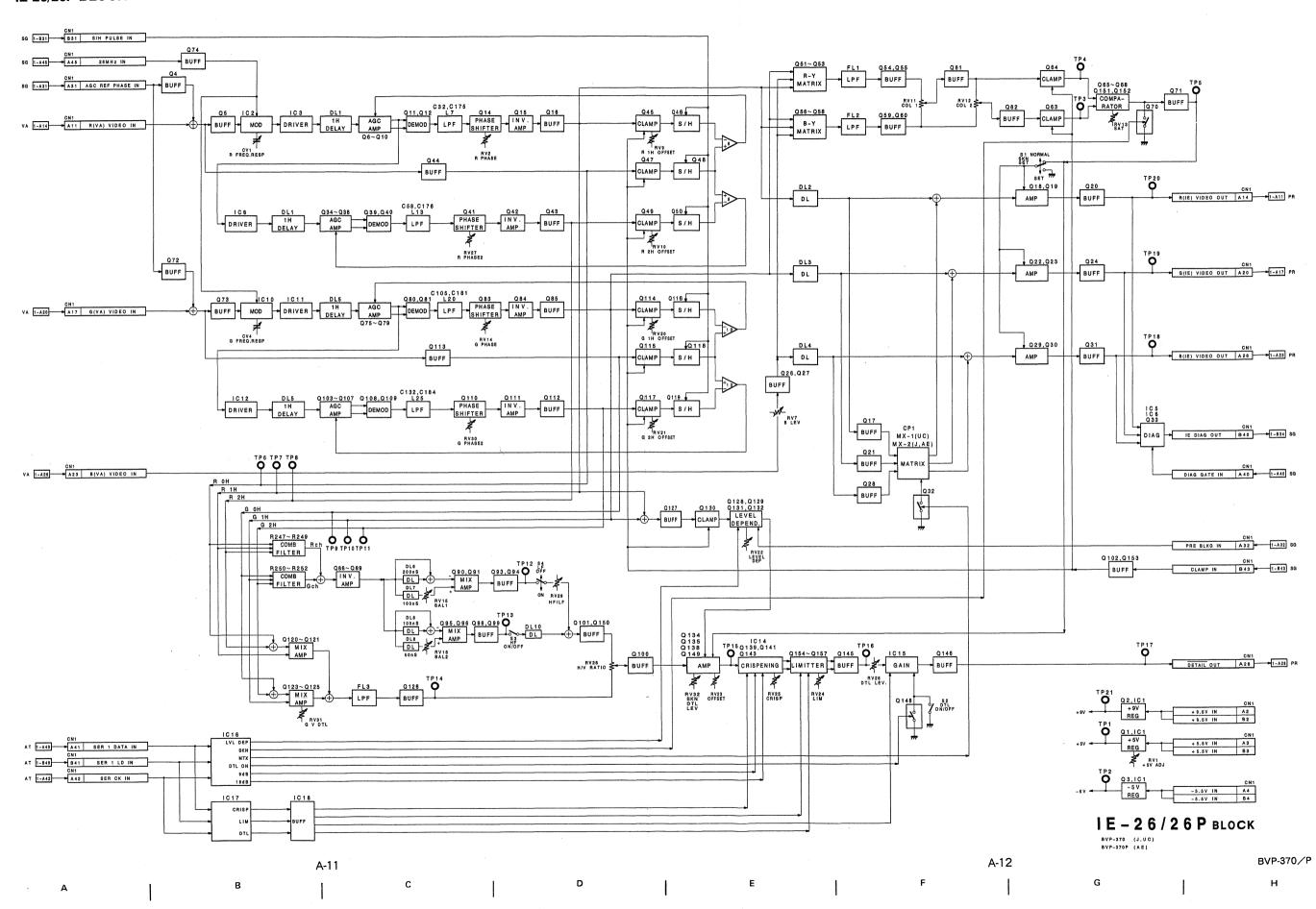
BVP-370/P

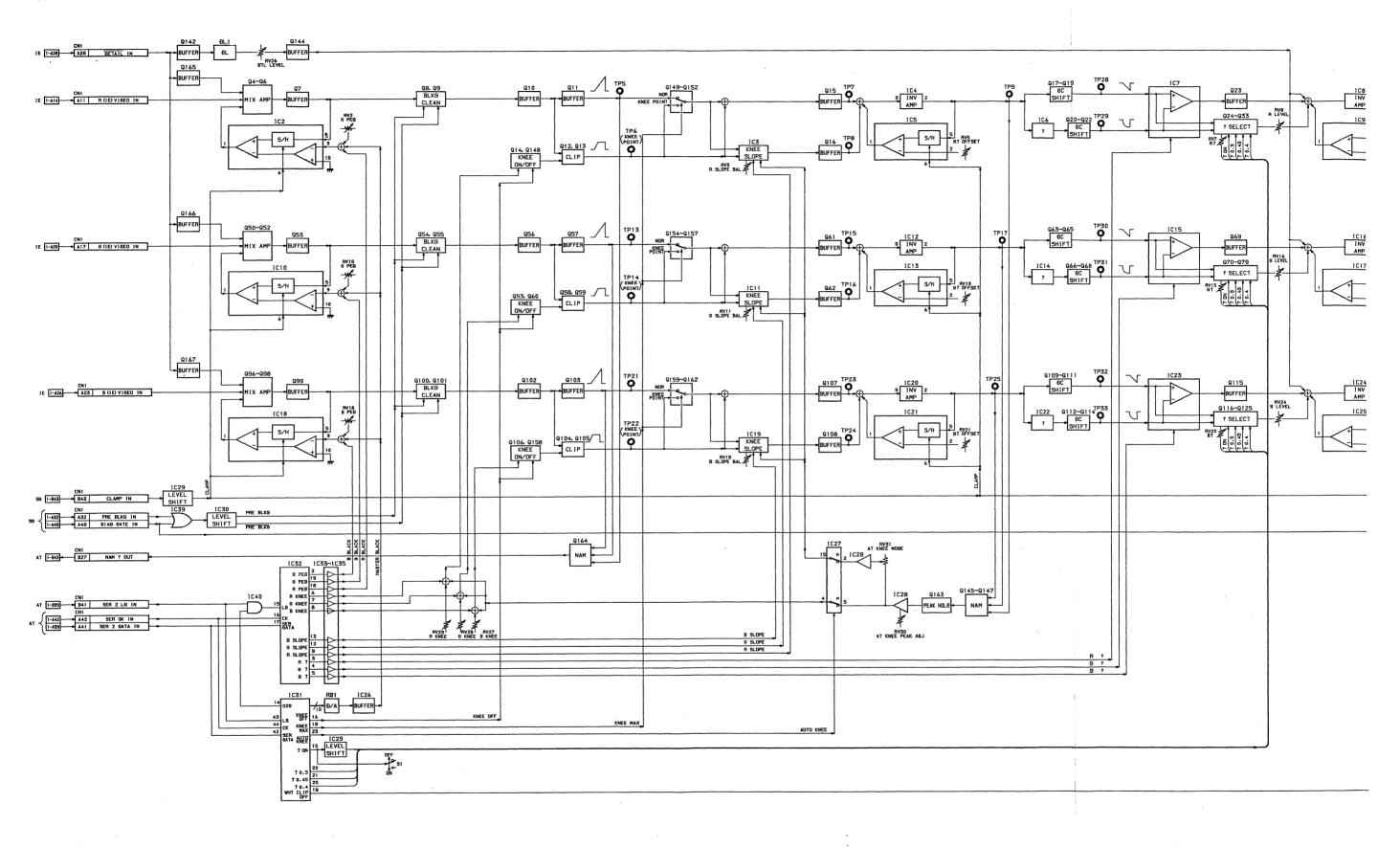
•

J

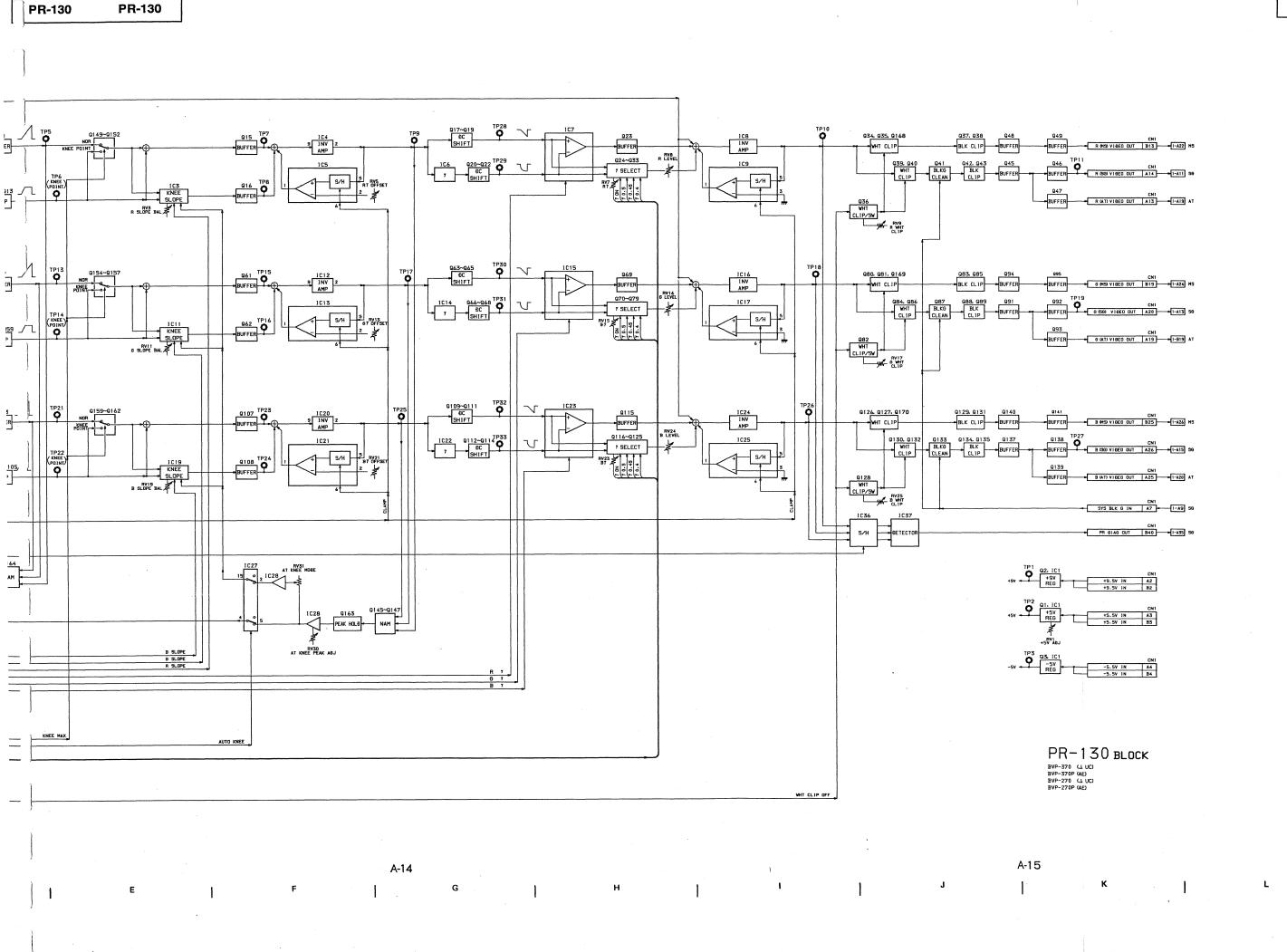
· •

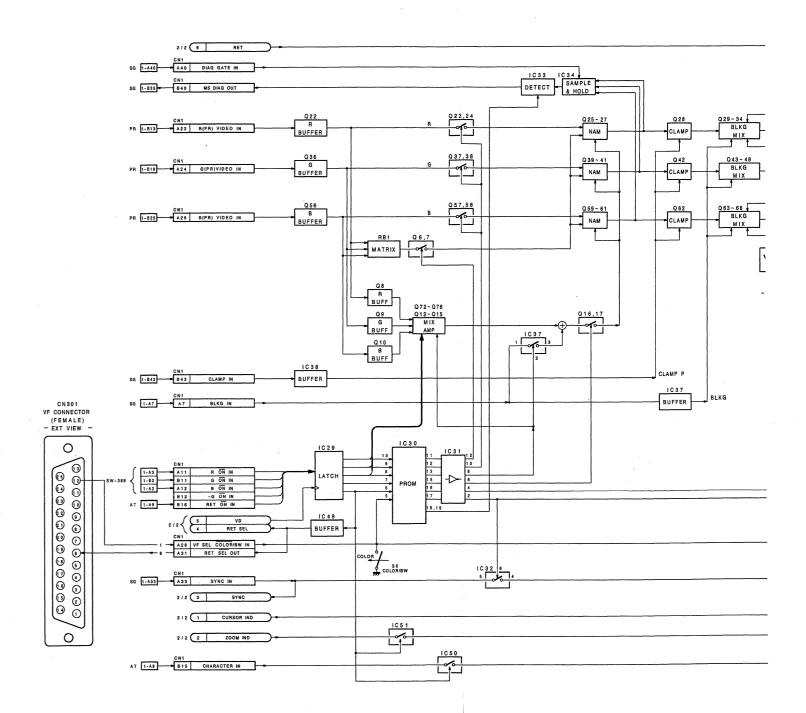
IE-26/26P BLOCK



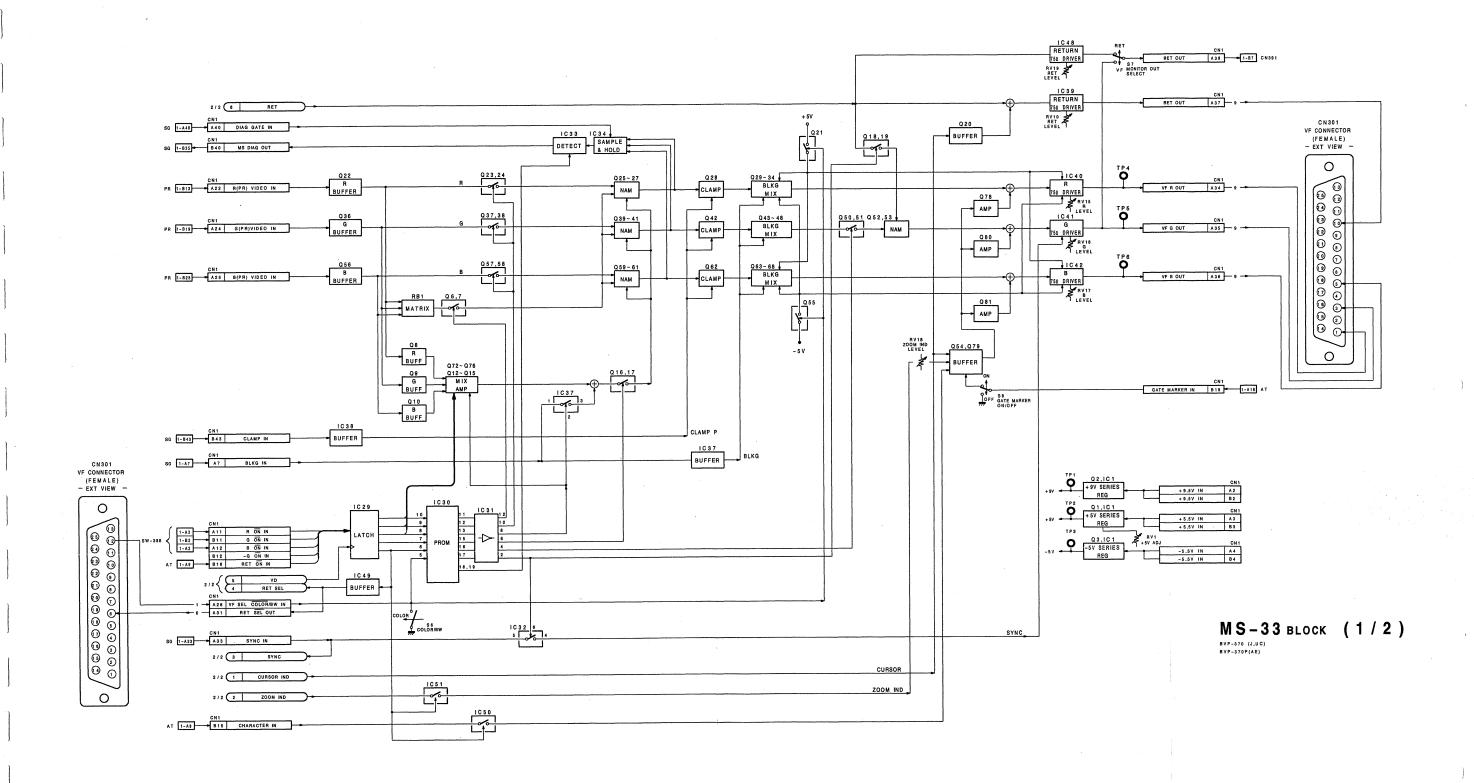


BVP-370/P BVP-270/P A | B | C | D | E | F | G | H |

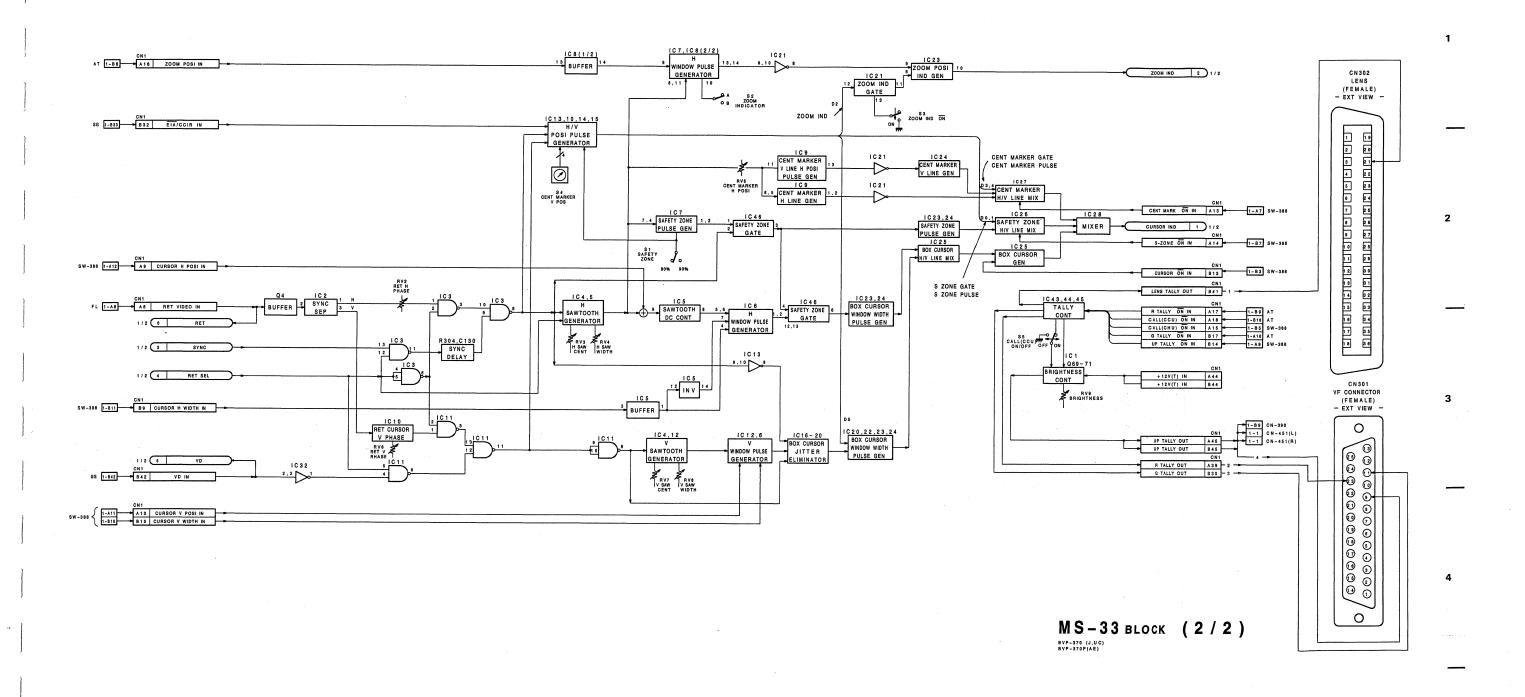




A-16



BVP-370/P



BVP-370/P

A-19

1

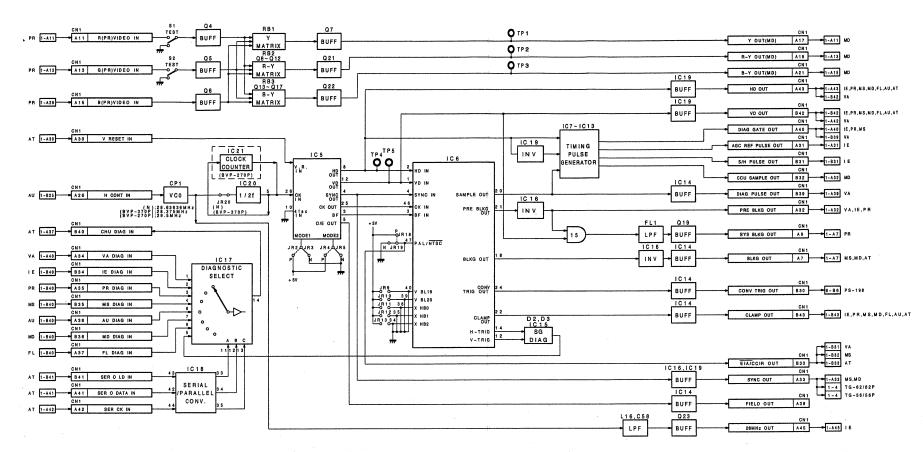
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G

A-20

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SG-167/167P/167AP BLOCK



SG-167/167P BLOCK

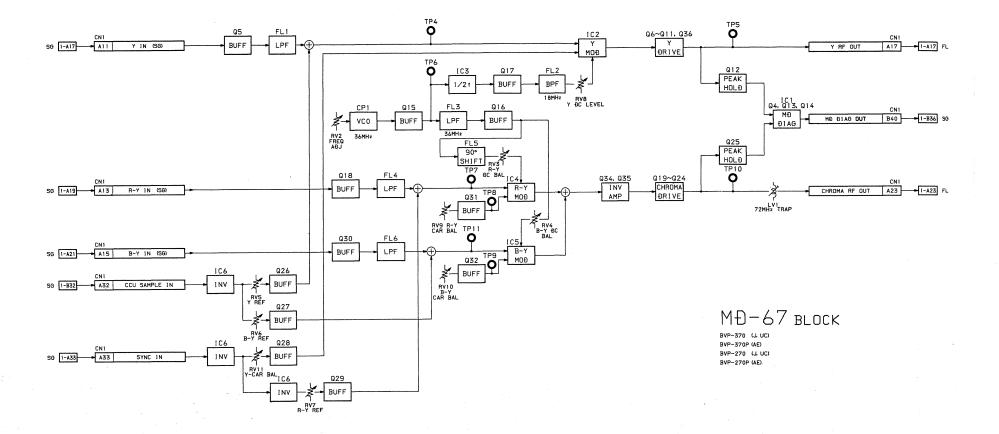
BVP-370 (J,UC) BVP-370P(AE) BVP-270 (J,UC)

SG-167AP BLOCK

A-21

A-22

BVP-370/P BVP-270/P



A-24

A-23

BVP-370/P BVP-270/P

TRIAX

TRIAX

WILTINES

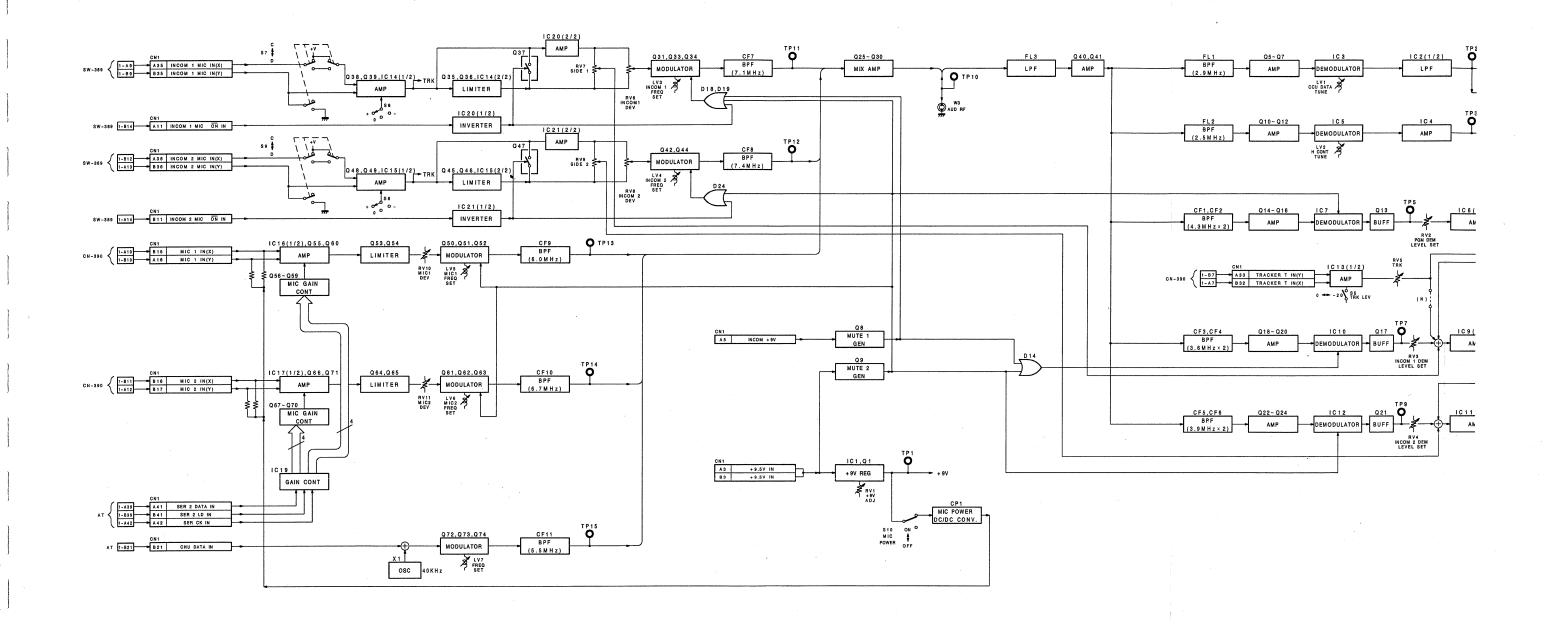
WI

A-25

A-26

BVP-370/P
BVP-270/P

Α



BVP-370/P

A-27

AU-129/129P BLOCK

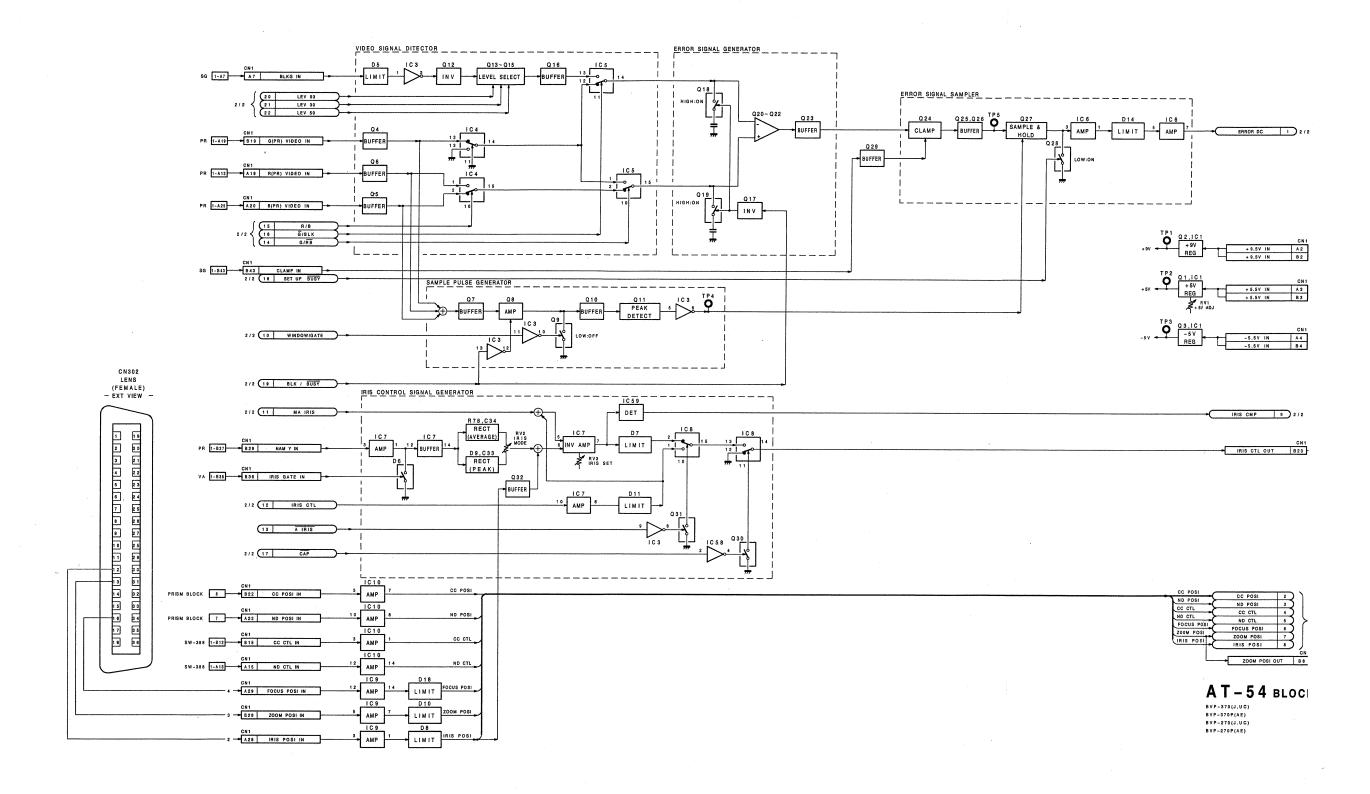
A-28

A-29

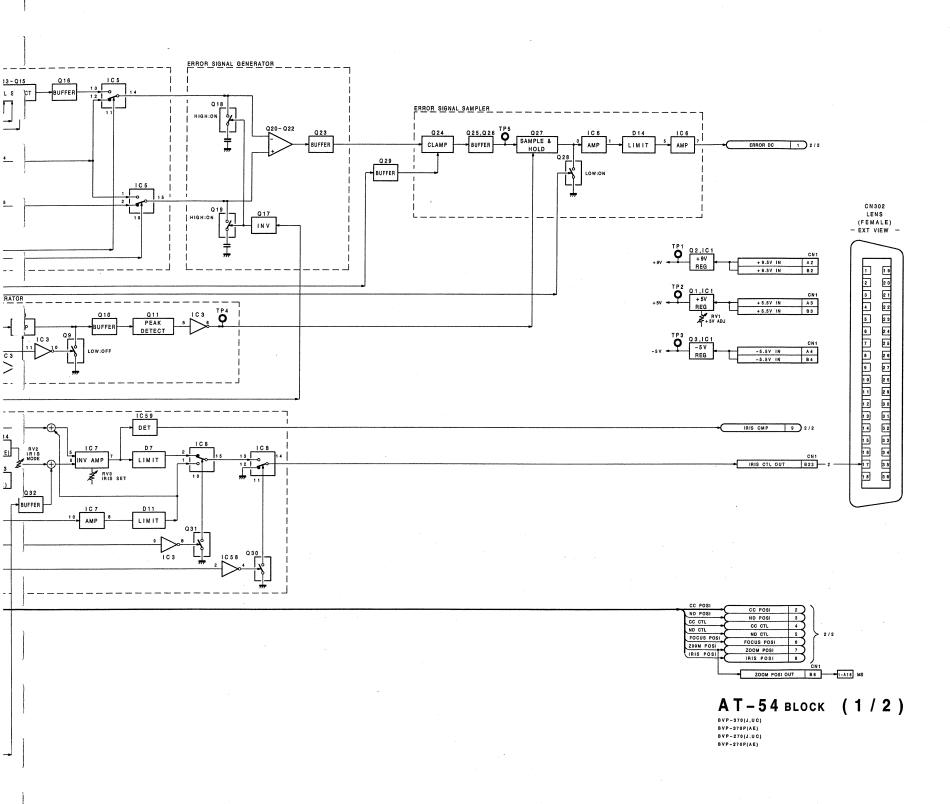
129P

AU-129/129P

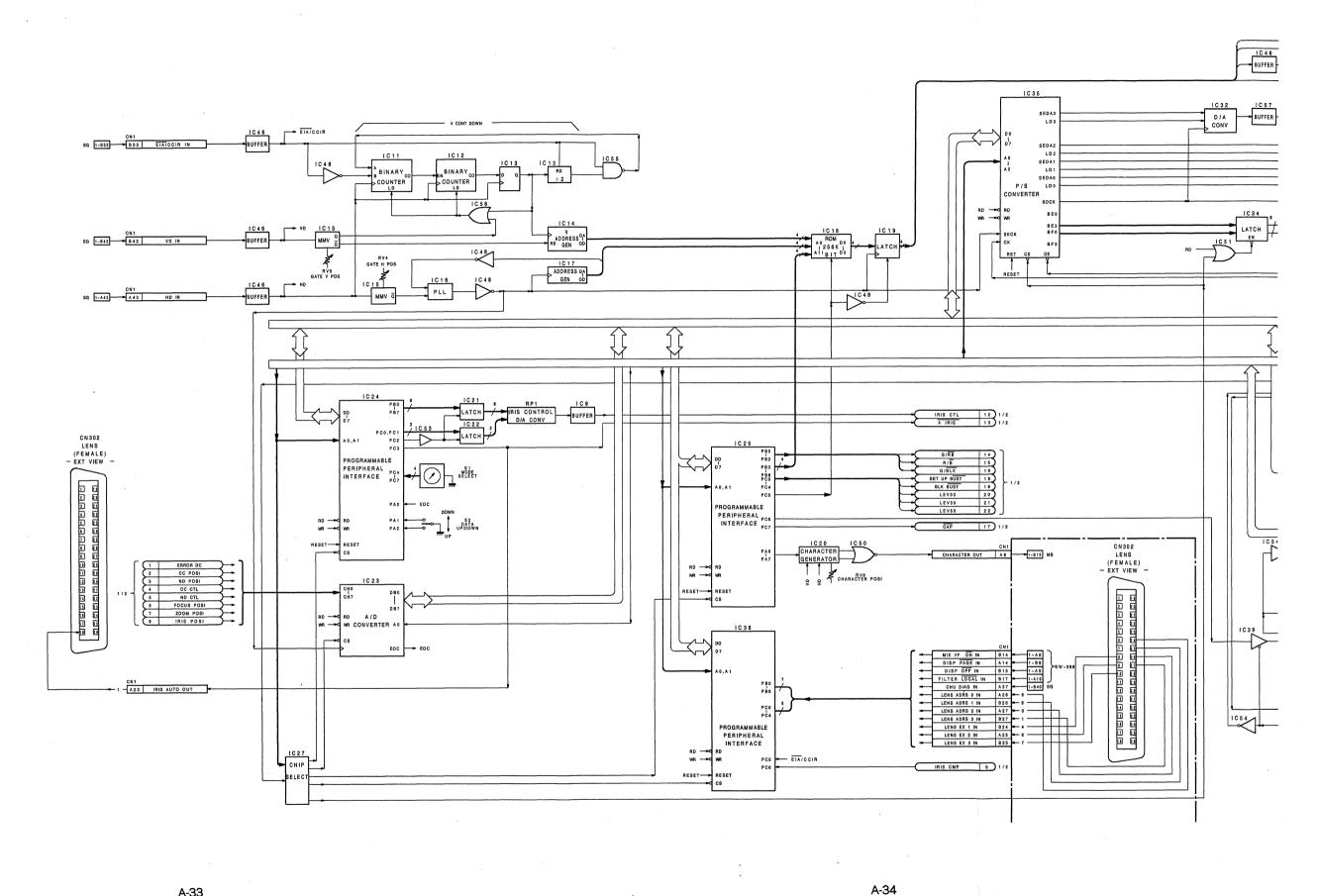
AT-54 BLOCK (1/2)



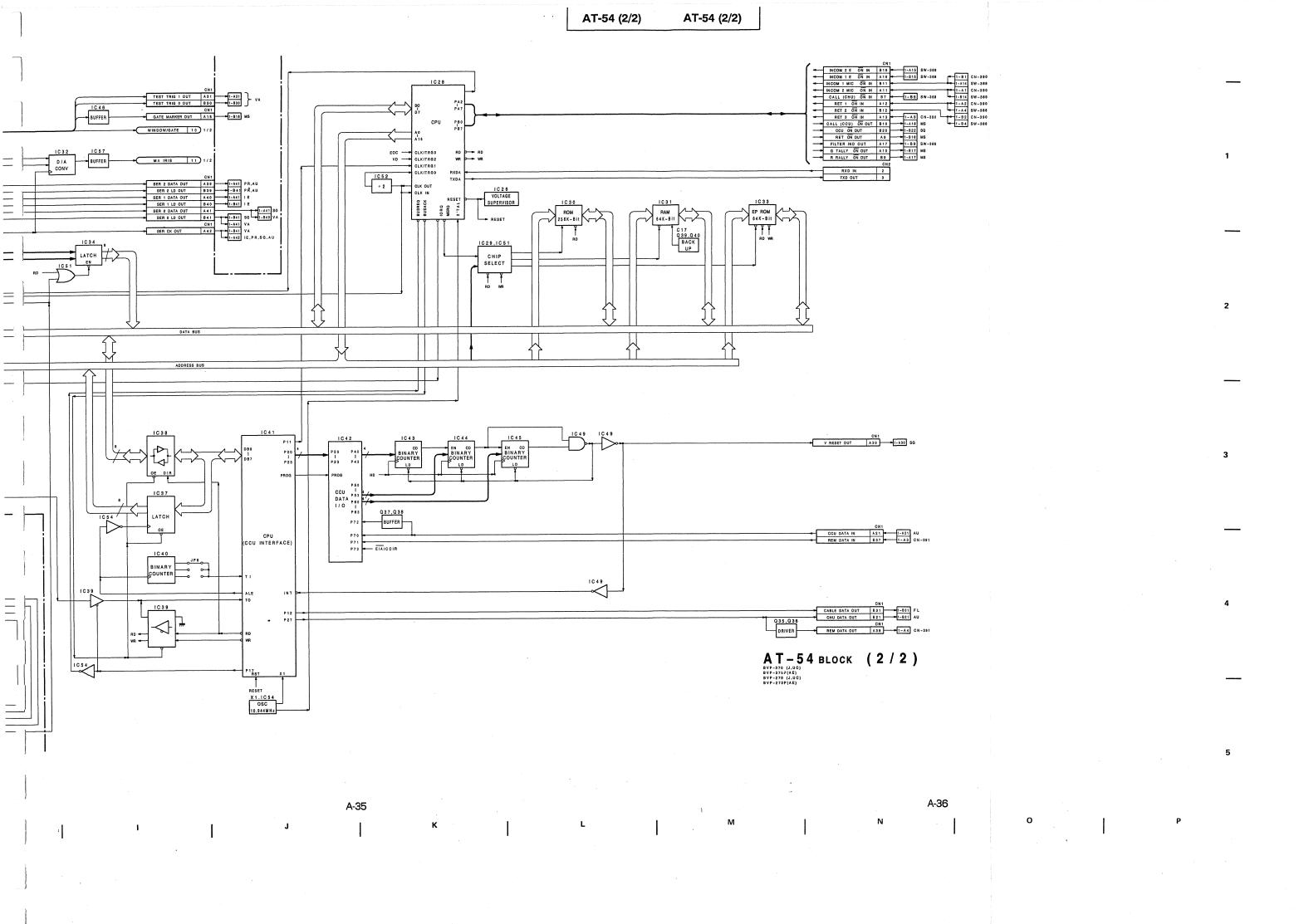
A-30

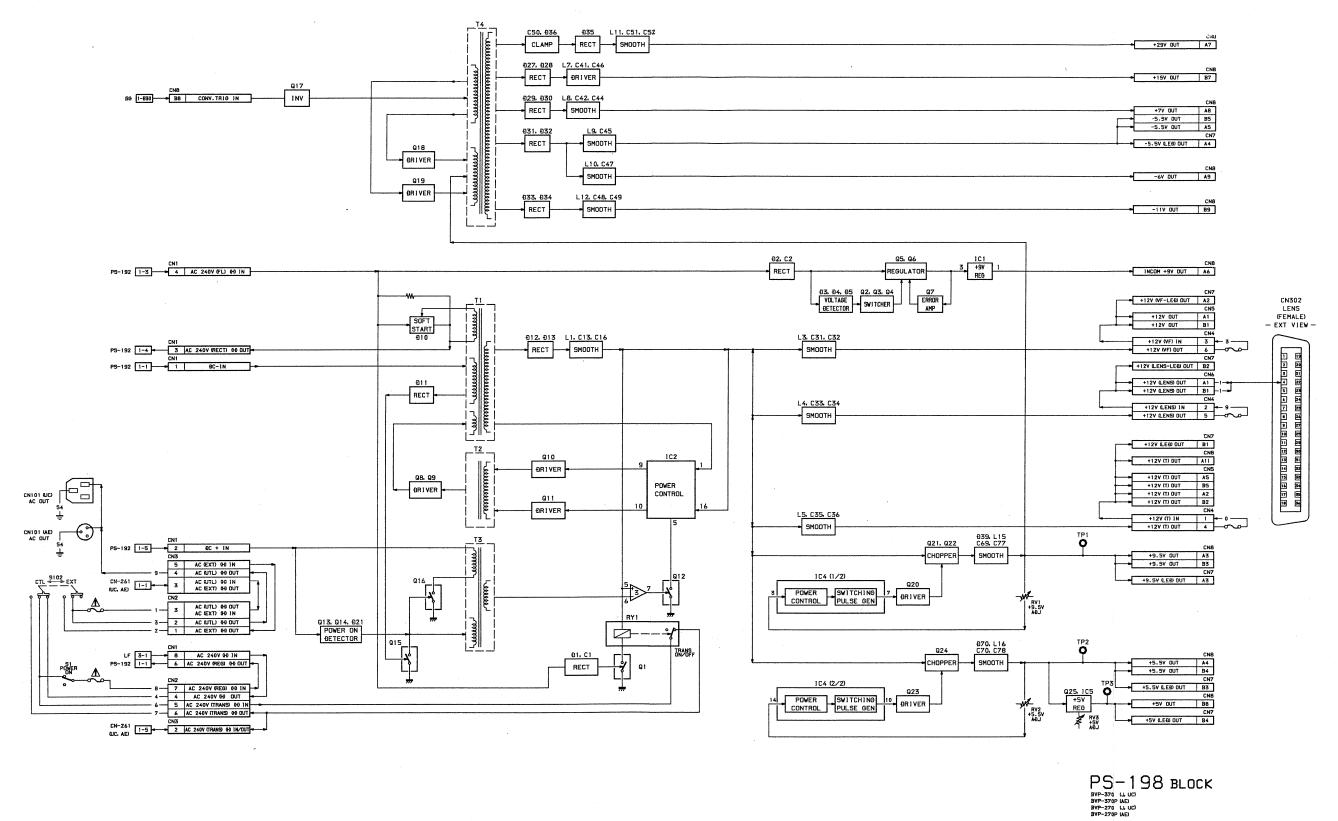


A-31



BVP-370/P BVP-270/P





A-39

A-40

BVP-370/P BVP-270/P

0

SECTION B SEMICONDUCTOR

The circuit diagram of IC is obtained from the IC data book published by the manufacturer.

TYPE	PAGE	TYPE	PAGE	TYPE	PAGE
101555	D 2	25/612	D 4	14D711441 DE	D 00
1\$1555		2SK612		MB7114LPF	
181585		2SK620		MB88341PF · · · · · · · · · · ·	· В-23
1S1588		B2SK94·····		NADNA0700E6W 0E	n o á
1\$2076A ·····		3SK163·····	· D-4	MBM27C256A-25 · · · · · · ·	. 6-24
1S2348H · · · · · · · · · · · · · · · · · · ·		74F175SJ · · · · · · · · · · · · · · · · · · ·	. DE	MC14001BCP	
1\$2836		141 17555	- 6-0	MC14001BF · · · · · · · · · ·	
1S2837 · · · · · · · · · · · · · · · · · · ·		BD703G		MC14011BF · · · · · · · · · ·	
1S2838 · · · · · · · · · · · · · · · · · ·	· ·	551030	0-0	MC14017BF · · · · · · · · · ·	
132838	5.0	BX1082	. R.5	MC14040BF · · · · · · · · ·	
1SS119·····	. p.q	BX1304·····		MC14046BF · · · · · · · · · ·	
1SS123 · · · · · · · · · · · · · · · · · · ·		BX1305		MC14050BF · · · · · · · · · ·	
1SS226 · · · · · · · · · · · · · · · · · ·		BX1356		MC14053BF · · · · · · · · · · ·	
1SS97 · · · · · · · · · · · · · · · · · · ·		BX1000	D-O	MC14071BF · · · · · · · · ·	
15551	50	CX7930A · · · · · · · · · · · · · · · · · · ·	· R-6	MC14081BF · · · · · · · · · ·	
1SZ ? ?·····	B-3	CX7969		MC14512BF · · · · · · · · · ·	
1SZ46A·····		CX7998······		MC14538BF ·····	
102-1071	2.0	571.000	50	MC34182M · · · · · · · · · · · ·	
2SA1122 · · · · · · · · · · · · · · · · · ·	· B-4	CXA1065M	· B-9	14100-4102141	520
2SA1156 · · · · · · · · · · · · · · · · · · ·				MC74HC4050F·····	- B-26
2SA1162 · · · · · · · · · · · ·		CXD1035BQ-Z	· B-10	MC74HC4053F·····	
2SA1175 · · · · · · · · · · · ·		CXD1141M		MC74HC4316F·····	
2SA1226 · · · · · · · · · · · ·		CXD1216M		MC74HC4538F·····	
2SA1385 · · · · · · · · · · · · · · · · · · ·		CXD1217M · · · · · · · · · · · ·			
2SA1462 · · · · · · · · · · · · · · · · · · ·		CXD1361M		MN1237A	B-27
2SA1463 · · · · · · · · · · · · · · · · · · ·		CXD8002 · · · · · · · · · · · · · · · · · ·	· B-18		:
2SA812·····		CXD8071Q		MP7523SOP · · · · · · · · · · · · · · · · · · ·	· B-27
		CXD8072Q			
2SB1295 · · · · · · · · · · · · · · · · · · ·	· B-4			MSM80C49GS	B-28
2SB624 · · · · · · · · · · · · · · · · · · ·		DTA144EK	· B-4	MSM82C55A-5GS · · · · · ·	
2SB733 · · · · · · · · · · · · · · · · · ·	· B-4			•	
2SB815 · · · · · · · · · · · · · · · · · · ·	· B-4	ERA81-004 ·····	· B-3	NTM2369·····	B-4
		ERA81-005 ·····	· B-3		
2SC1009A · · · · · · · · · · · · · · · · · · ·	· B-4	ERA82-004 ·····	· B-3	RC1496M · · · · · · · · · · · ·	B-29
2SC1623 · · · · · · · · · · · · · · · · · · ·				RC4556MA	B-29
2SC2458 · · · · · · · · · · · · · · · · · · ·		ERB81-004·····	· B-3	RC4558M · · · · · · · · · · · · · · · · · · ·	B-29
2SC2542 · · · · · · · · · · · · · · · · · · ·					
2SC2551 · · · · · · · · · · · · · · · · · ·		ERC81-004·····	· B-3	RC78 ? ?FA	B-30
2802712					
2SC2712G · · · · · · · · · · · ·		ESAD85-009 · · · · · · · · · · ·	· B-3	RD ? ?EB ?	
2SC2714 ·····				RD ? ?EL ?	B-3
2SC2757 · · · · · · · · · · · · · · · · · ·		FC53M·····	· B-3	RD ? ?ESB ?·····	
2SC2785 · · · · · · · · · · · · · · · · · · ·				RD ? ?ESL ?	
2SC3115 ·····	and the second s	HA12412 · · · · · · · · · · · · · · · · · · ·	· B-22	RD ? ?MB ?	B-3
2SC3150 · · · · · · · · · · · · · · · · · · ·		1177110017			
2SC3318 · · · · · · · · · · · · · · · · · · ·		HD74AC04P-R ······	· B-22	RH1A	B-3
2SC3327 ·····					
2SC3518 · · · · · · · · · · · · · · · · · · ·		HSM88AS	· В-З	SL3127C	B-30
2SC641K · · · · · · · · · · · · · · · · · · ·	· B-4				
0051001	D 4	HZ ?B ?L ······		SN74HC04NS·····	
2SD1061 · · · · · · · · · · · · · · · · · · ·		HZ ?BLL	・ ㅂ-෮	SN74HC163NS·····	
2SD1111 · · · · · · · · · · · · · · · · ·		10		SN74HC244NS······	B-30
2SD1271 · · · · · · · · · · · · · · · · · · ·		IC	•	SN74HC266NS	B-31
2SD596 · · · · · · · · · · · · · · · · · · ·		I P156	. p.o	SN74HC574NS	
2SD774·····		LB156 · · · · · · · · · · · · · · · · · · ·	D-3	SN74HC7266NS	B-31
230109	. ப~4	LM1881N	B.22	SN74HC74NS SN74HC86NS	
2SK160	- R-4	LM35DZ ······		214 1 4F1COOH3	D-31
2SK508 · · · · · · · · · · · · · · · · · · ·		LIVIOUDE .	U-ZJ	TA7303P · · · · · · · · · · · · · · · · · · ·	D.01
20,000	₩ ¬	MA152WK	B-3	1/4/0001	וכים

EMICONDUCTOR INDEX

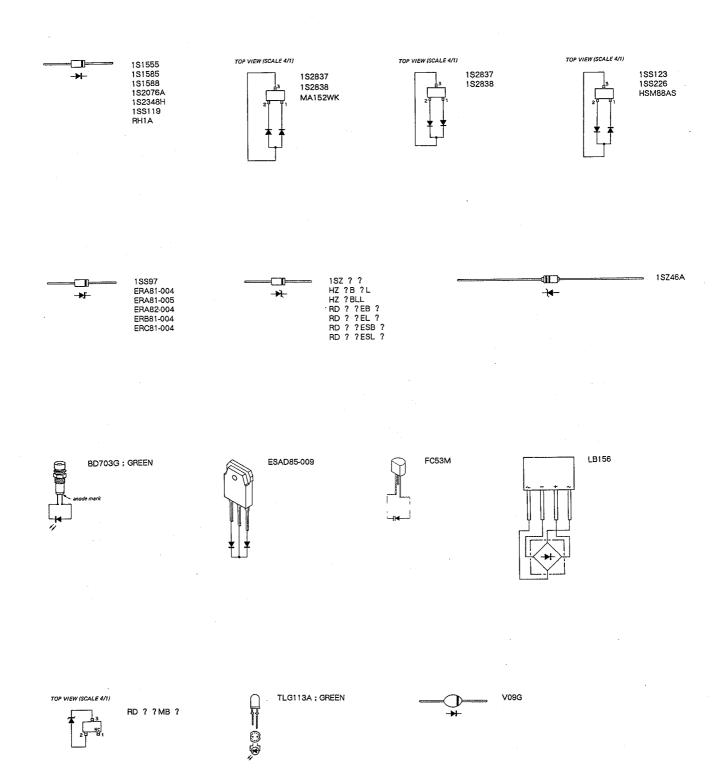
TYPE

XN6435 · · · · B-4 XN6534 · · · · B-4

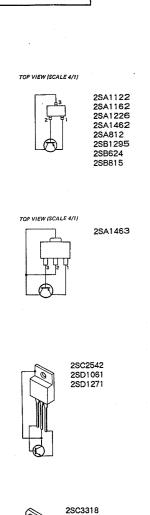
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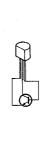
TYPE	PAGE
TC4001BP TC4049BF	B-24 B-31
TC40498F TC40H000F TC40H002F TC40H008F TC40H032F TC40H074F TC40H138F TC40H163F TC40H174F TC40H174F TC40H174F TC40H244F TC40H245F TC40H374F	B-31 B-31 B-32 B-32 B-32 B-32 B-32 B-33 B-33 B-33
TC4S01F TC4S11F TC4S69F TC4S71F TC4S81F TC4SU69F	B-33 B-33 B-33 B-33
TC5564AFL-15 TC5564APL-15	· B-34 · B-34
TC7S00F	· B-34 · B-34
TL062CPTL062CPSTL064CNSTL082CPS	· B-34 · B-35
TL1451ACN	· B-35
TL494CN	· B-35
TL7700CPS	· B-35
TLC27L2CPS ············ TLC27L4CNS ········	· B-35 · B-35
TLG113A ·····	· B-3
TMPZ84C015AF TMPZ84C015AF-6 TMPZ84C015BF-6	· B-36
uPC339G2 · · · · · · · · · · · · · · · · · · ·	· B-37 · B-37 · B-37
uPD27C512G-20uPD28C64C-25uPD7004CuPD82C43G	. R.37
V09G	· B-3

3VP-370 / P



RANSISTOR





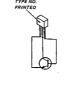


2SA1156

2SB733



2SC3518



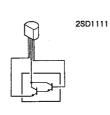


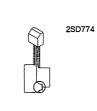




2SC1009A 2SC1623 2SC2712 2SC2712G 2SC2714 2SC2757 2SC3115 2SD596 NTM2369

2SA1175

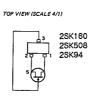


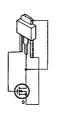


2SC3150

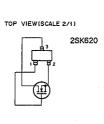




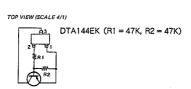


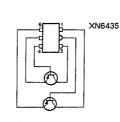


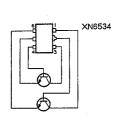








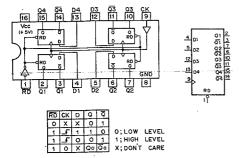




2SA1385

2SC2458 2SC3327

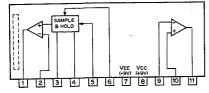
74F175SJ (FSC) FLAT PACKAGE TTL D-TYPE FLIP-FLOP WITH CLEAR
- TOP VIEW -



BX1082 (SONY)

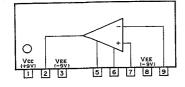
OPERATIONAL AMPLIFIER
- REAR VIEW -





BX1304 (SONY)

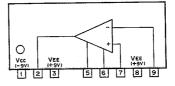
VIDEO AMPLIFIER
- PRINTED SIDE -



BX1305 (SONY)

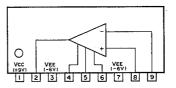
VIDEO AMPLIFIER - PRINTED SIDE -

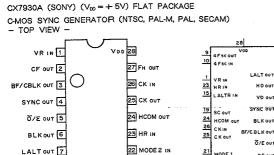


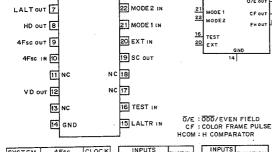


BX1356 (SONY)

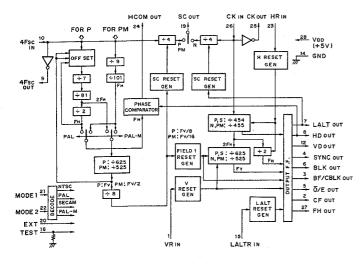
VIDEO OUTPUT AMPLIFIER - PRINTED SIDE -





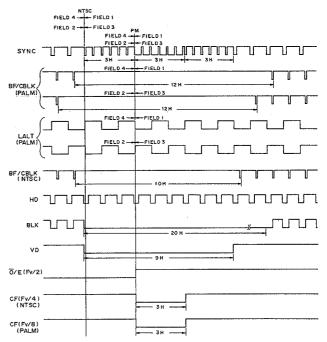


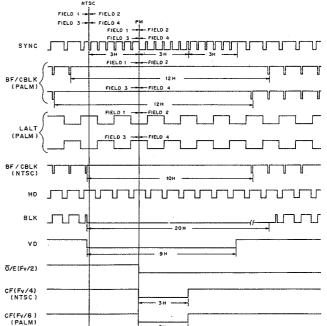
SYSTEM	4Fsc	CLOCK		UTS	SYSTEM		PUTS	FUNCTION	
NTSC	910 FH	910FH	MODE 1	MODE 2		EXT	TEST	. 011011011	
PAL	1135FH+2FV	908FH	0	0	NTSC	0	0	INTÉRNAL	
PALM	909 FH	910FH	0	1	SECAM	0	1	INVALID	
SECAM		908FH	1	0	PALM	1	0	EXT	
			1	1	PAL	1	1	TEST	
					L (GND) L (VDD)	. (INT	I *0": OPEN ERNALLY LED DOWN	١

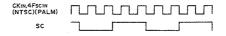


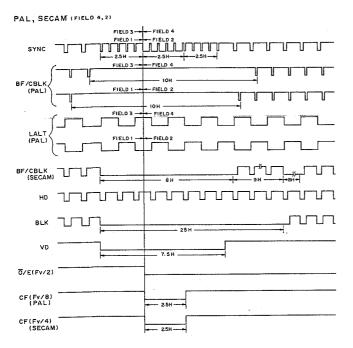
NTSC, PAL-M (FIELD 1,3)

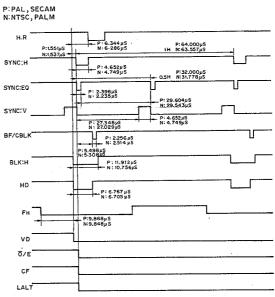
NTSC, PAL-M (FIELD 2, 4)

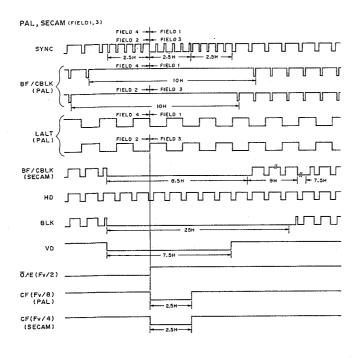




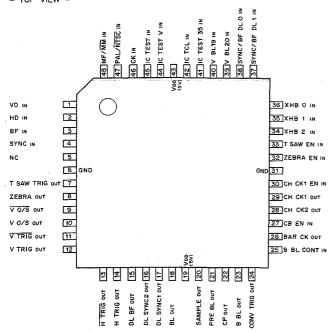








CX7969 (SONY) C-MOS PULSE GENERATOR - TOP VIEW -



1. SYSTEM DES	IGNATION
INPUT	SYSTEM
PAL/NTSC IN	313121
1	PAL, SECAM
0	NTSC, PALM

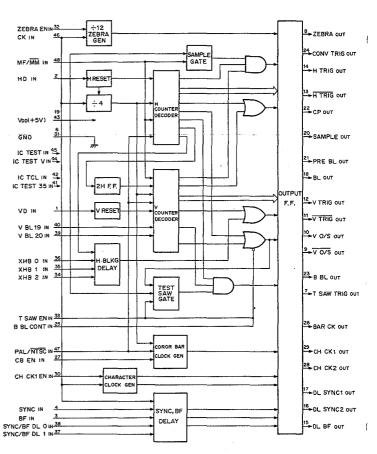
2. TYPE OF TU	BE
INPUT	FUNCTION
MF/MM IN	FUNCTION
1	MAG-STA TUBE
0	MAG -MAG TUBE

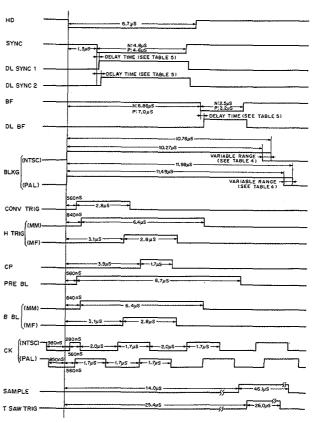
3.V BLF	G WIDT	TH (NTSC ONLY
INP		V BLKG WIDTH
V BL 19	V BL 20	A PEKG MIDIU
1	X	19H
0	1	20H
0	0	21 H

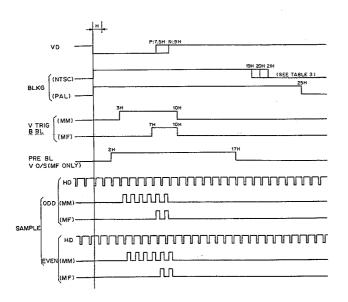
4. H	A. H BLKG WIDTH								
	NPUT		BLKG W	IDTH (µS)					
XHB2	XHB1	XHBO	NTSC	PAL					
1	1	1	10.27	11.49					
1	1	0	10.34	11.56					
1	0	1	10.41	11,63					
1	0	0	10.48	11.70					
0	1	1	10.55	11.77					
0	1	0	10.62	11,84					
0	0	1	10.69	11.91					
0	0	0	10.76	11.98					

INF	TUT	DELA	Y TIME (S)
SYNC/BF DL1	SYNC/BF DL2	DL SYNC 1	DL SYNC 2	DL BF
1	1	140	210	140
1	0	210	280	210
0	1	630	700	630
0	0	700	770	700

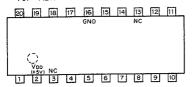
1; HIGH LEVEL O; LOW LEVEL X; DON'T CARE





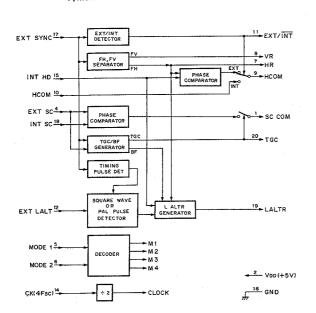


CX7998 (SONY) FLAT PACKAGE C-MOS GENLOCK DRIVER - TOP VIEW -

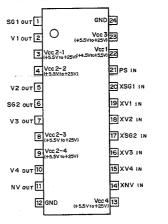


	PUTS	-	XT LOCK MODE
MODE 1	MODE 2	-	X1 FOCK MODE
0	0	M 1	PAL:VBS
1	0	M 2	PAL-M:VBS
		м3	PAL:VS/SC/LALT
O	1	IM 3	SECAM:VS/SC/LALT
	1		NTSC:VBS
1	1 1	M 4	NTSC: VS/SC
	1		PAL-M:VS/SC/LALT

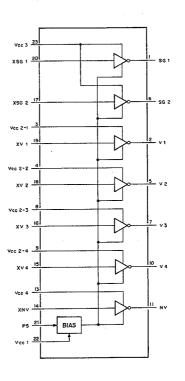
o; LOW LEVEL 1 HIGH LEVEL

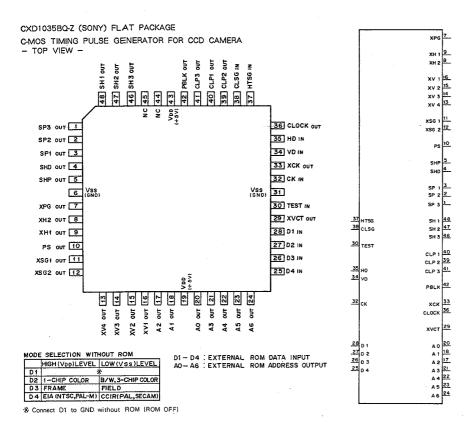


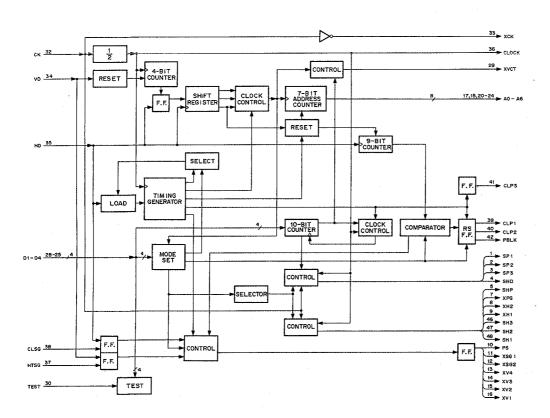
CXA1065M (SONY) FLAT PACKAGE INVERTING DRIVER FOR CCD CLOCK WITH POWER SAVE

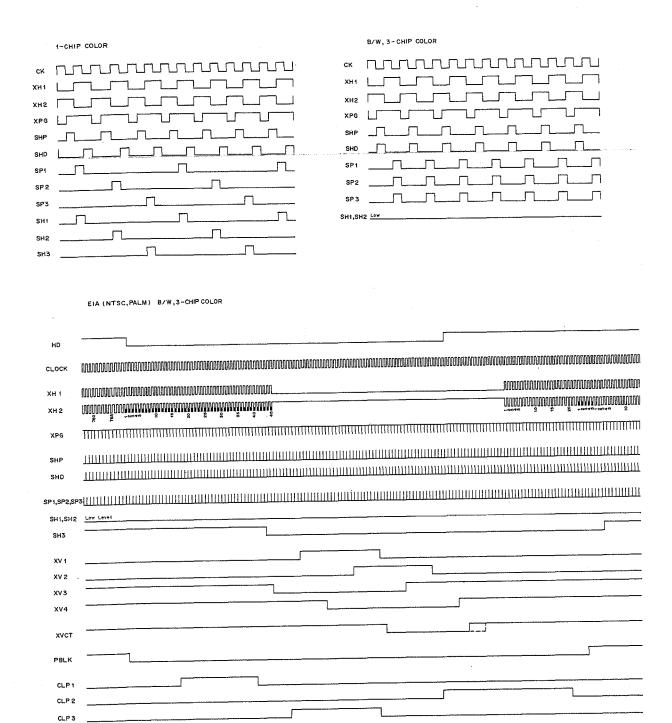


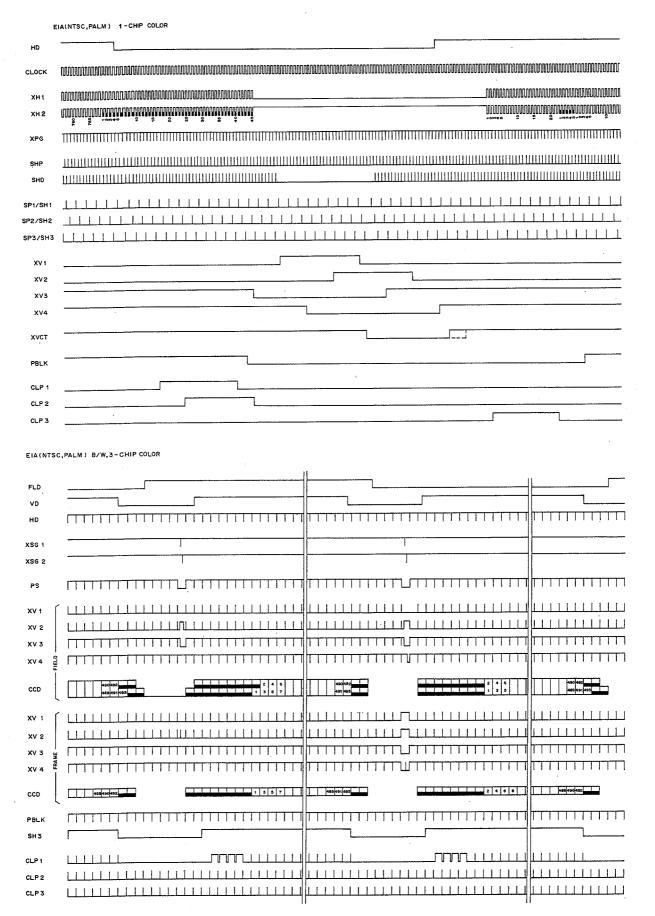
XV1-XV4; VERTICAL REGISTER TRANSMISSION CLOCK INPUT V1-V4; VERTICAL REGISTER TRANSMISSION CLOCK OUTPUT XSG1,XSG2; SENSOR GATE PULSE INPUT SG1,SG2; SENSOR GATE PULSE OUTPUT XNV; DRIVER INPUT NV; DRIVER OUTPUT PS; POWER SAVE INPUT Vcc1; BIAS VOLTAGE Vcc2-1; V1 OUTPUT PULSE VOLTAGE Vcc2-2; V2 OUTPUT PULSE VOLTAGE Vcc2-3; V3 OUTPUT PULSE VOLTAGE Vcc2-4; V4 OUTPUT PULSE VOLTAGE Vcc3; SG1,SG2 OUTPUT PULSE VOLTAGE Vcc4; NV OUTPUT PULSE VOLTAGE Vcc4; NV OUTPUT PULSE VOLTAGE

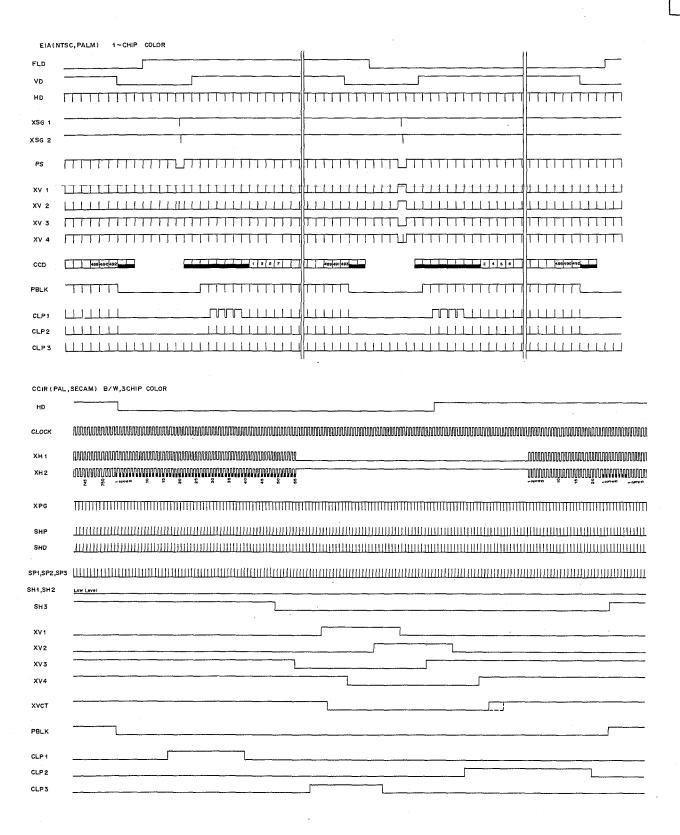


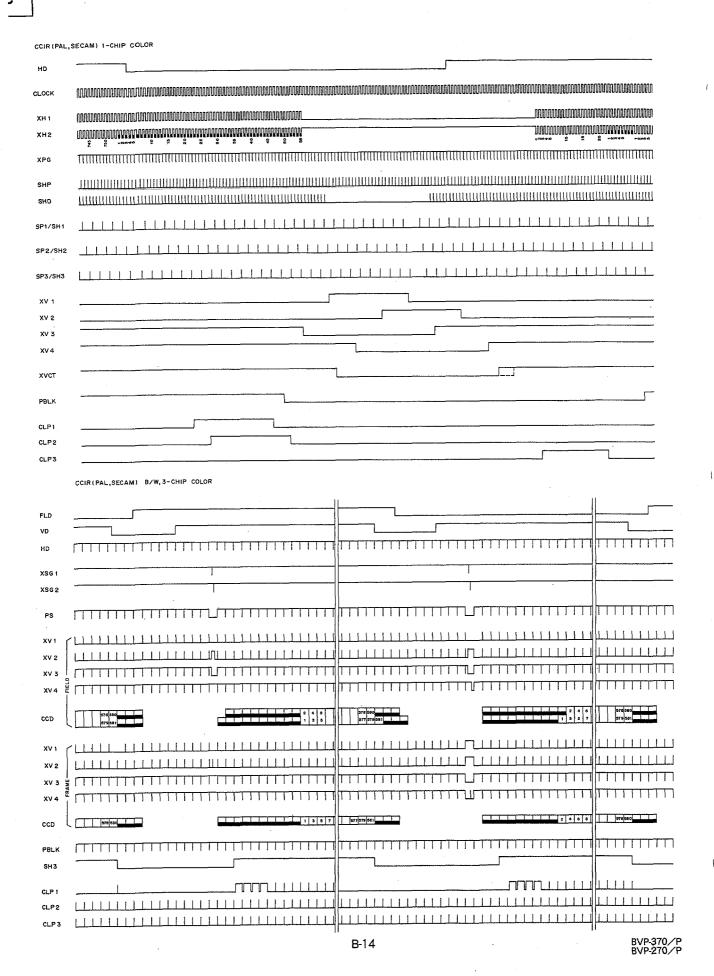


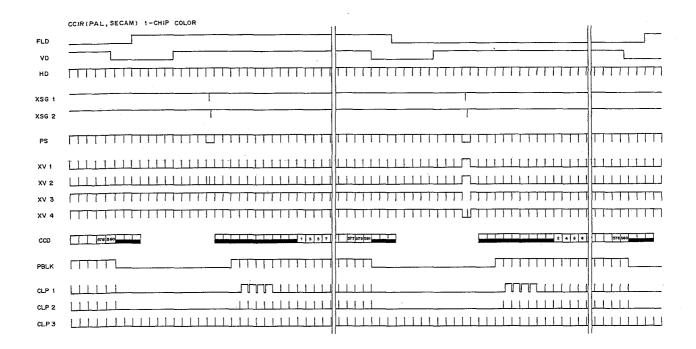




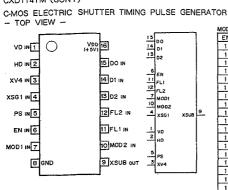








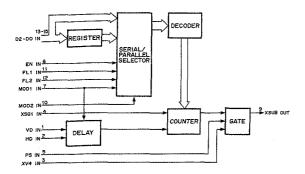
CXD1141M (SONY)



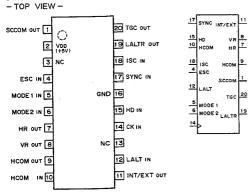
EN	MOD1	MOD2	FL1	FL2	D2	DI	DO	SHUTTER SPEE
1	1	1	1		0	0	0	1/60
1	1	1	1		0	0	1	1/125
1	1	1	1		0	1	0	1/250
1	1	1	1		0	1	1	1/500
1	1	1	1		1	0	0	1/1000
1	1	1	1		1	0	1	1/2000
1	1	1	1	1	1	1	0	1/4000
1	1	1	1		1	1	1	1/10000
1	0	1	1		0	0	0	1/60
1	0	1	1		0	0	1	1/125
1	0	1	1	1	0	1	0	1/250
1	0	1	1		0	1	1	1/500
1	0	1	1		1	0	0	1/1000
1	0	1	1		1	0	1	1/2000
1	0	1	1	1	1	1	0	1/4000
1	0	1	1		1	1	1	1/10000
1	1		0	1				1/100
1	1		0	0				1/120
1	0		0	1				1/100
1	0		0	0	7			1/120
O NORMAL								
:10	W LE	VEL						·

ESTABLISH INPUTS OF SHUTTER SPEED
ENABLE IMPUT LOW: NORMAL MODE, HIGH: ELECTRONIC SHUTTER MODE
MODE SELECT INPUT. LOW: FLICKBRLESS, HIGH: NORMAL
MODE SELECT INPUT. LOW: 50HZ. HIGH: 50HZ
HORIZONTAL DRIVE PULSE INPUT
MODE SELECT INPUT. LOW: PAL, HIGH: NTSC
MODE SELECT INPUT. LOW: PAL, HIGH: NTSC
MODE SELECT INPUT. LOW: SERIAL INPUT, HIGH: PARALLEL INPUT
FOMER SAVE PULSE INPUT
VERTICAL DRIVE PULSE INPUT
READ OUT PULSE INFUT OF SENSOR ELECTRON
ELECTRON SWEEP OUT PULSE INPUT
VERTICAL SCAN CLOCK INPUT

D0-D3; EN; FL1; FL2; HD;

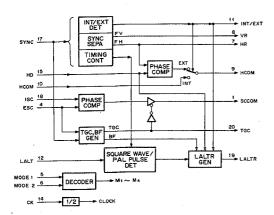


BVP-370/P BVP-270/P



1		TU	MODE	SYSTEM
	MODE1	MODE2	NODE	
	0	0	M1	PAL-VBS
	1	0	M2	PALM-VBS
	0	1	M3	PAL,SECAM-VS/SC/LALT
	1	1	M4	NTSC-VBS,NTSC-VS/SC PALM-VS/SC/LALT

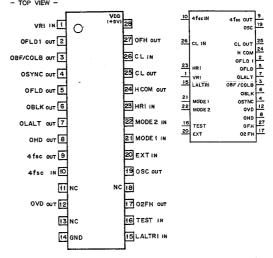
0 ; LOW LEVEL 1 ; HIGH LEVEL



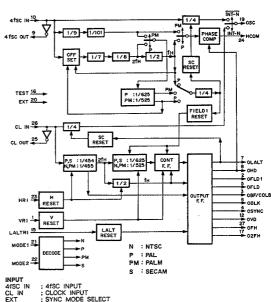
INPUT
CK : 4fsc CLOCK INPUT
CSC : SC/COLOR BURST
HCOM : PHASE COMPARATE FROM CXD1217
HD : H DRIVE FROM CXD1217
ISC : SURCE FROM CXD1217
ISC : SURCE FROM CXD1217
IALT FROM REFERENCE SIGNAL GENERATOR
MODE1.2 : SYSTEM SELEC

OUTPUT
HCOM : PHASE COMPARATOR HR WITH HD
HR : fH OF SYNC SEPARATE
INT/EXT : INTERNAL/EXTERNAL SPECIFIED
LALTR
SCOOM : PHASE COMPARATOR ESC WITH ISC
TGC : TRISTATE CONTROL
VR : fV OF SYNC SEPARATE

CXD1217M (SONY) FLAT PACKAGE C-MOS SYNC GENERATOR - TOP VIEW -



SYSTEM	4fsc	CLOCK	INF		SYSTEM
NTSC	910fu	910fH	MODE1	MODE2	SISIEM
PAL	1135fH+2fv	908fis	0	0	NTSC
PALM	909fH	910fн	0	1	SECAM
SECAM		908fH	1	0	PALM
			1	1	PAL



OUT PUT

CL OUT : 4fSC OUTPUT

CL OUT : CLOCK OUTPUT

HACSE COMPARATOR

O2FH : 2FH OUTPUT

OBF_COLE: BURST FLAG_COLOR BLANKING

OBLK : COMPOSITE BLANKING

OFH : H FREQUIENCE

OFLD : EVEN, ODO

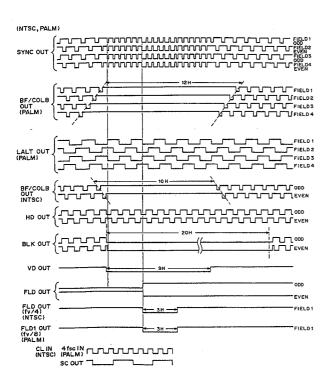
OFLD : FIELD :

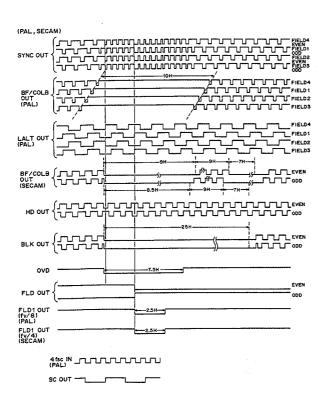
OHD : H DRIVE

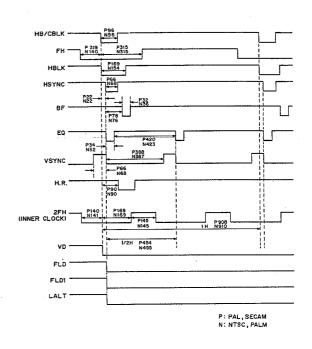
OAL : LINE CHANGE

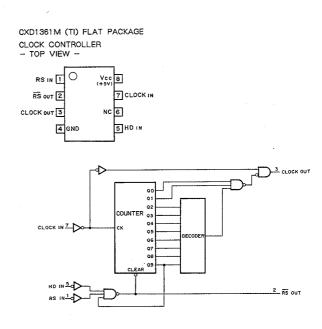
OSYNC : COMPOSITE SYNC

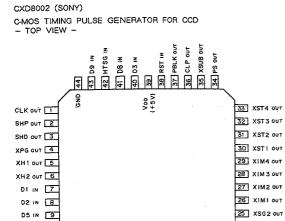
OVD : V DRIVE











XCK out

CK

C P E

N Q N

MODE	SELECT	
	LOW LEVEL	HIGH LEVEL
D1	CCIR	EIA
D2	FRAME	FIELD
D2	FRAME	FIELD

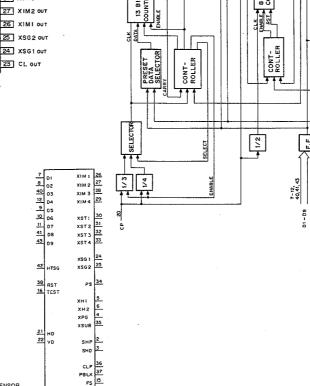
XV1 our XV3 our FS our TEST IN

D6 IN 10

SHUT	SHUTTER SPEED SELECT										
D4	D5	D6	D7	SHUTTER SPEED (sec)							
0	0	0	1	OFF							
0	0	1	1	1/125							
0	1	0	1	1/250							
0	1	1	1_	1/500							
1	Ö	0	1	1/1000							
1	0	1	1	1/2000							
1	1	0	1	1/4000							
1	1	1	1	1/10000							
х	×	×	0	1/100 (EIA) 1/60 (CCIR)							

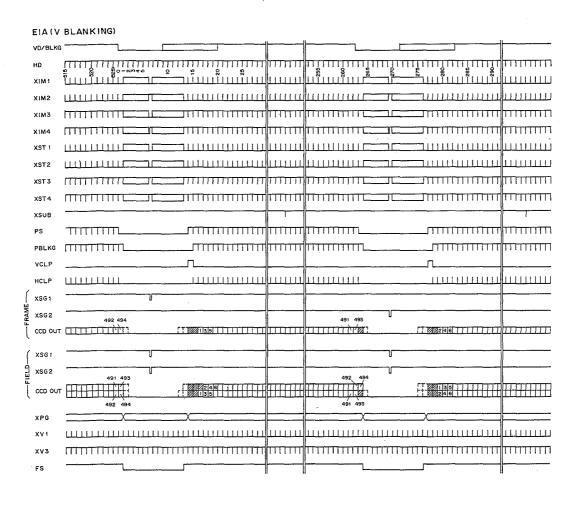
0 : LOW LEVEL 1 : HIGH LEVEL X : DON'T CARE

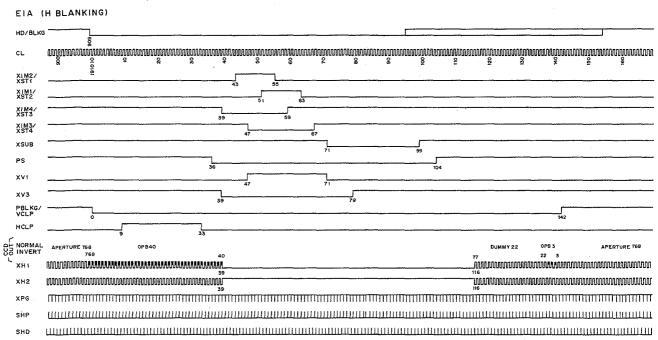
XCK CLK, CL HD VD	CLOCK INPUTS INVERTED CLOCK OUTPUT CLOCK OUTPUTS CLOCK OUTPUTS HORIZONTAL DRIVE INPUT VERTICAL DRIVE INPUT VERTICAL DRIVE INPUT CLOCK OUTPUTS FOR READ OUT FROM IMAGE SENSOR CLOCK OUTPUTS FOR IMAGE REGISTOR DRIVE OF CCD CLOCK OUTPUTS FOR IMAGE REGISTOR DRIVE OF CCD VERTICAL DRIVER POWER SAVE PULSE OUTPUT HORIZONTAL REGISTOR TRANSMISSION CLOCK OUTPUTS PRECHARGE GATE PULSE OUTPUT ELECTRIC CHARGE DISCHARGING PULSE OUTPUT DATA LEVEL SAMPLE & HOLD PULSE OUTPUT CLAMP PULSE OUTPUT PREBLANKING PULSE OUTPUT FREALANKING PULSE OUTPUT FLAG CLOCK OUTPUTS FOR INTERFACE READ OUT STOP SIGNAL IMPUT
HTSG RST, TEST D1 - D3, D8, D9	: READ OUT STOP SIGNAL INPUT : TEST MODE SIGNAL INPUTS : MODE SELECT SIGNAL INPUTS : SHUTTER SPEED MODE SIGNAL INPUTS
	•



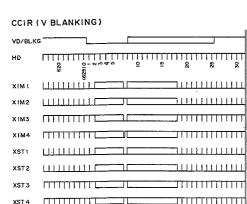
F0

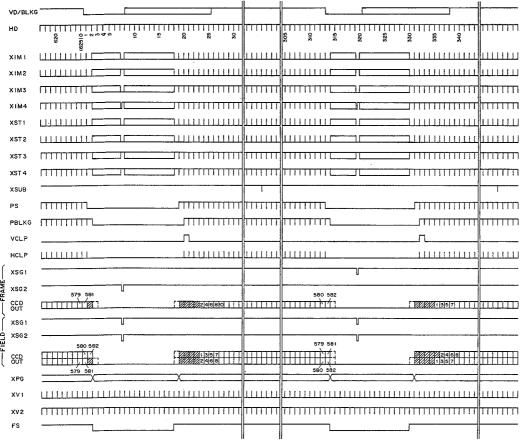
B-18

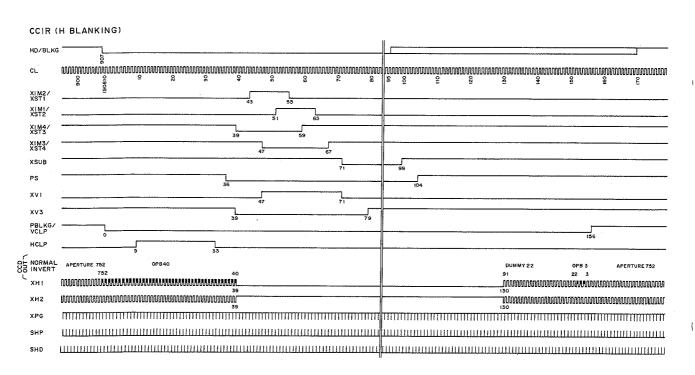




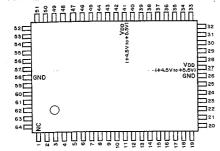
BVP-370/P BVP-270/P



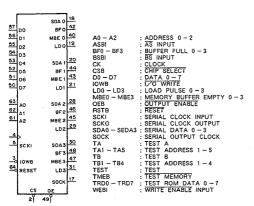


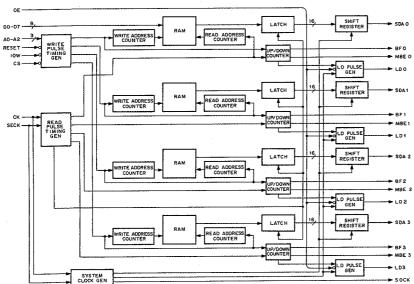


CXD8071Q (SONY) FLAT PACKAGE
C-MOS PARALLEL TO SERIAL CONVERTER
- TOP VIEW -



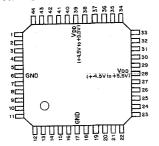
								(V _□	D == +	4.5V	to +5.5V)
PIN NO.	1/0	SYMBOL	PIN NO.	1/0	SYMBOL	PIN NO.	1/0	SYMBOL	PIN NO.	1/0	SYMBOL
1	_	NC	17	0	SOCK	33	0	TRD1	49	- 1	OEB
2	1	CSB	18	0	SDAO	34	0	TRD2	50	1	D7 .
3	ı	IOWB	19	0	LDO	35	0	TRD3	5	-	D6
4	T	CK	20	0	SDA1	36	0	TRD4	52	. 1	D5
5	1	SCKI	21	0	LD1	37	0	TRD5	53	- 1	D4
6	0	SCKO	22	1	TB1	38	0	TRD6	54	. 1	D3
7	1	TA	23	-	TB2	39	0	TRD7	55	_	D2
8	П	TB	24	1	TB3	40	0	MBEO	56	1	D1
9	T	TEST	25	1	TB4	41		Voo	57	1	D0
10	1	TA1	26	-	GND	42	0	. BF0	58	-	GND
11	Ī	TA2	27	-	Voo	43	0	MBE1	59		WEBI
12	1	TA3	28	0	SDA2	44	0	BF1	60		TA5
13	ī	TA4	29	0	LD2	45	0	MBE2	61	1	A2
14	ī	ASBI	30	0	SDA3	46	0	BF2	62		A1
15	1	TMEB	31	0	LD3	47	0	MBE3	63	1	A0
16	1	BSBI	32	0	TRD0	48	0	BF3	64		RSTB



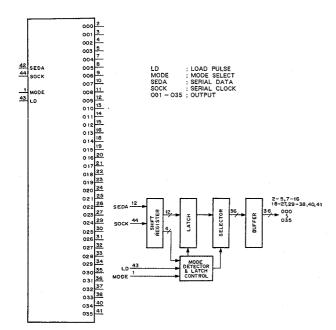


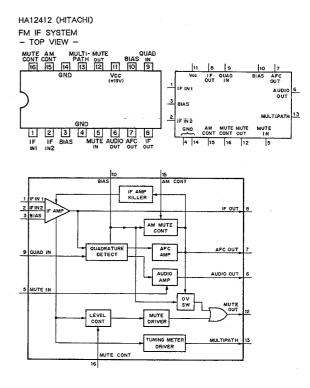
B-21

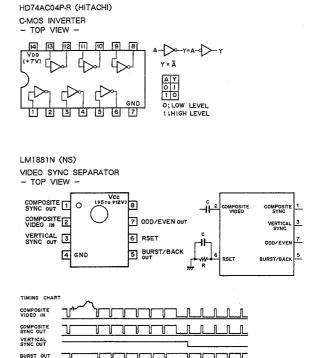
BVP-370/P BVP-270/P CXD8072Q (SONY) FLAT PACKAGE C-MOS SERIAL TO PARALLEL CONVERTER - TOP VIEW -



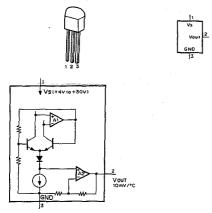
									(Vpp:	= + 4.	5V to +5.5V)
PIN NO.	1/0	SYMBOL	PIN NO.	1/0	SYMBOL	PIN NO.	ν ₍	SYMBOL	PIN NO.	1/0	SYMBOL
1	\Box	MODE	12	0	O09	23	0	O19	34	0	O29
2	0	000	13	0	O10	24	0	O20	35	0	O30
3	0	O01	14	0	011	25	0	O21	36	0	O31
4	0	O02	15	0	012	26	0	022	37	0	O32
5	0	O03	16	0	013	27	0	023	38	0	O33
6	-	GND	17	-	GND	28	-	Voo	39	-	Voo
7	0	O04	18	0	014	29	0	O24	40	0	O34
8	0	O05	19	0	O15	30	0	O25	41	0	O35
9	0	O06	20	0	O16	31	0	O26	42		SEDA
10	ō	007	21	0	017	32	0	O27	43	1	LD
11	0	008	22	0	O18	33	0	O28	44	Ī	SOCK .



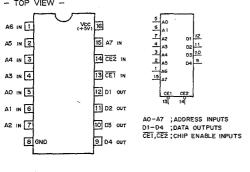


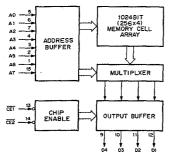


LM35DZ (NATIONAL) BIPOLAR TEMPERATURE SENSOR

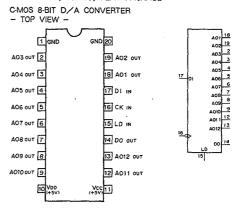


MB7114LPF (FUJITSU) (ACCESS TIME = 50nS) FLAT PACKAGE 1024-BIT (256x4) PROM - TOP VIEW -

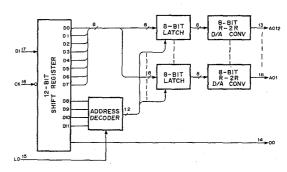




MB88341PF (FUJITSU) FLAT PACKAGE

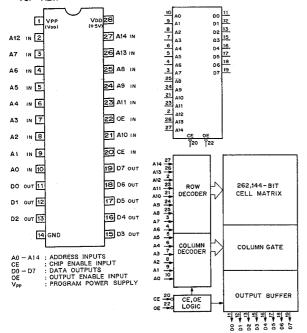


AG1 - AG12 : 8-BIT D/A OUTPUTS
CK : CLOCK INPUT
D : SEMAL DATA INPUT
DO : DATA OUTPUT
LD : DATA CADA CONTROL INPUT (H:LOAD)



MBM27C256A-25 (FUJITSU) (ACCESS TIME = 250nS)

C-MOS 256K(32Kx8)-BIT UV ERASABLE PROM WITH 3-STATE OUTPUTS - TOP VIEW -



An	CE	OE	VDD	Vpp	Dn	FUNCTION	1
An	0	0	+5V	+ 5V	D out	READ	1
An	0	1	+5V	+5V	HI-Z	OUTPUT DISABLE	1
X	1	X	+5V	+5V	HI∽Z	STANDBY	i
An	0	1	+6٧	+12.5V	DIN	PGM]
Αn	1	0	+6V	+12.5V	D out	PGM VERIFY(1)	O: LOW LEVEL
An	0	0	+6V	+12.5V	Dour	PGM VERIFY(2)	1:HIGH LEVEL
X	1	1	+6V	+12.5V	HI-Z	PGM INH	X:DON'T CARE
AO	0	0	+5V	+5 V	DEVICE CODE	ELECTRONIC SIGNATURE*	HI-Z:HIGH IMPEDANCE

#\$SEE FOLLOWING DESCRIPTION.

ELECTRONIC SIGNATURE FOR P ROM WRITER

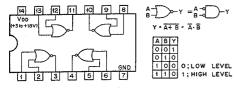
ADDRESS SETTINGS IN READ MODE

AT A8 A9 A10-A13 A14,Vpp

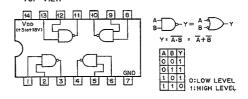
_										
	AO	D7	D6	D5	D4	D3	D2	D1	DO	Ì
MAKER CODE	0	-0	0	0	0	0	1	0	0	04H
DEVICE CODE	1	0	1	1	0	0	0	1	0	62H

MC14001BCP (MOTOROLA) MC14001BF (MOTOROLA) FLAT PACKAGE TC4001BP (TOSHIBA)

C-MOS 2-INPUT NOR GATE - TOP VIEW --

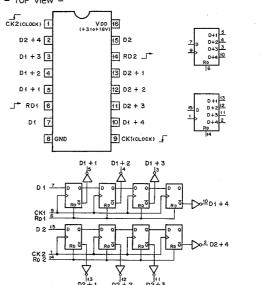


MC14011BF (MOTOROLA) FLAT PACKAGE C-MOS 2-INPUT NAND GATE - TOP VIEW -



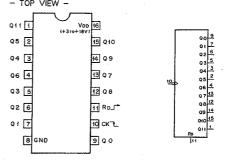
MC14015BF (MOTOROLA) FLAT PACKAGE

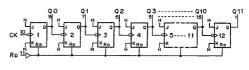
C-MOS DUAL 4-STAGE STATIC SHIFT REGISTER WITH DIRECT RESET - TOP VIEW -



MC14040BF (MOTOROLA) FLAT PACKAGE

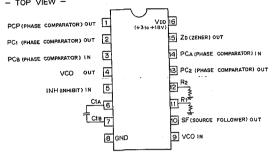
C-MOS 12-STAGE RIPPLE CARRY BINARY COUNTER/DRIVER - TOP VIEW -

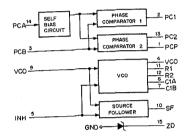




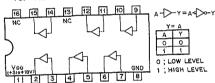
COUNT	QII	Q10	09	Q8	Q7	Q6	05	Q4	Q3	02	01	00		RD	Q11QO
0	0	0	0	0	0	0	0	0	0	0	0	0		1	ALL LOW
1	0	0	0	0	0	0	0	0	0	0	0	1	Į	٥	COUNT
2	0	0	0	0	0	0	0	0	o	0	1	0			
3	0	0	0	0	0	0	0	0	0	0	1	1			
			1		1				1						
			Ι.			1		1	} :				C); L	OW LEVEL
4095	1	1	1	1	1	1	1	1	1	1	1	1			IGH LEVEL

MC14046BF (MOTOROLA) FLAT PACKAGE C-MOS PHASE LOCKED LOOP - TOP VIEW -

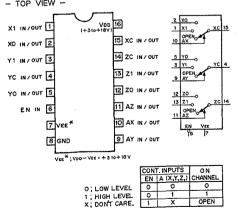




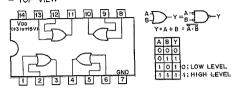
MC14050BF (MOTOROLA) FLAT PACKAGE. C-MOS NON-INVERTING TYPE BUFFER/CONVERTER - TOP VIEW -



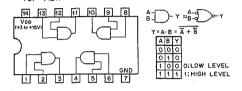
MC14053BF (MOTOROLA) FLAT PACKAGE C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER - TOP VIEW -



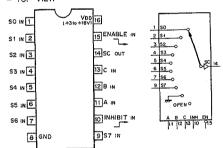
MC14071BF (MOTOROLA) FLAT PACKAGE C-MOS 2-INPUT OR GATE - TOP VIEW -



MC14081BF (MOTOROLA) FLAT PACKAGE C-MOS 2-INPUT AND GATE - TOP VIEW -

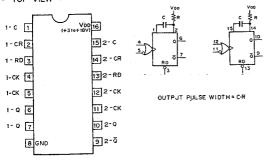


MC14512BF (MOTOROLA) FLAT PACKAGE C-MOS 8-CHANNEL DATA SELECTOR/MULTIPLEXER - TOP VIEW -



COV	TRO	L 1	NPU.	Γ\$	OUTPUT	
EN	INH	С	В	Α	sc	
0	0	0	0	0	so	
0	0	0	0	1	S1	
0	0	0	1	0	\$2	
0	0	0	1	1	\$3	
0	0	1	0	0	S4	
0	0	1	0	1	S 5	
0	0	1	1	0	S 6	
0	0	1	1	1	\$7	O; LOW LEVEL
0	1	x	X	X	GND	1 HIGH LEVEL
1	X	X	×	X	OPEN	X; DON'T CARE

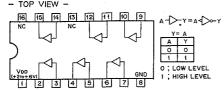
MC14538BF (MOTOROLA) FLAT PACKAGE C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR - TOP VIEW -



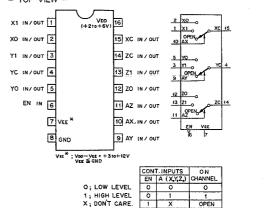
MC34182M (MOTOROLA) FLAT PACKAGE JFET INPUT OPERATIONAL AMPLIFIER - TOP VIEW -



MC74HC4050F (MOTOROLA) FLAT PACKAGE C-MOS NON-INVERTING TYPE BUFFER/CONVERTER - TOP VIEW -



MC74HC4053F (MOTOROLA) FLAT PACKAGE
CMOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -

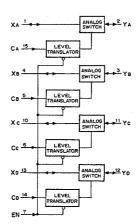


MC74HC4316F (MOTOROLA) FLAT PACKAGE C-MOS QUAD ANALOG SWITCH -- TOP VIEW --

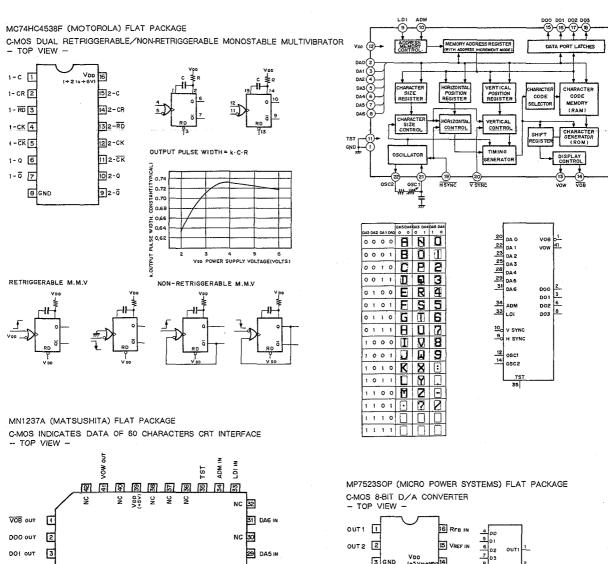


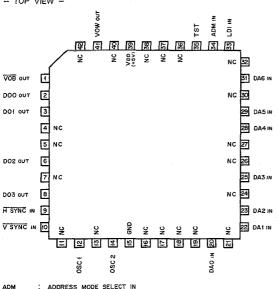
INP	UTS	STATE OF						
ĒN	С	ANALOG SWITCH						
0	1	ON						
0	0	OFF						
1 X OFF								
O; LOW LEVEL								

O; LOW LEVEL 1; HIGH LEVEL X; DON'T CARE



CA-CD; ON/OFF CONTROL INPUT EN; ENABLE INPUT XA-XD; ANALOG SIGNAL I/O YA-YD; ANALOG SIGNAL I/O





ADM ; ADDRESS MODE SELECT IN

DAO~DAG ; DATA BUS INPUT

DOO~DO3 ; GENERAL OUTPUT

H SYNC ; H SYNC INPUT

V SYNC ; V SYNC INPUT

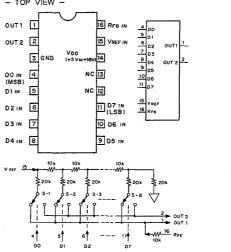
LDI ; STROBE PULSE INPUT

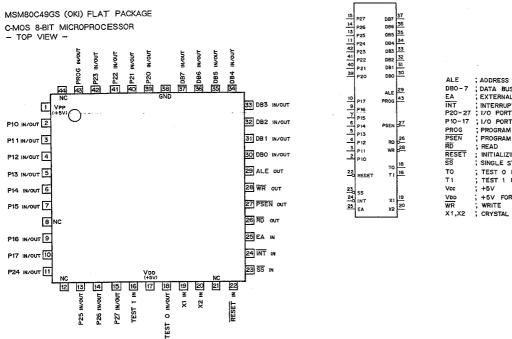
OSC1,2 ; OSC

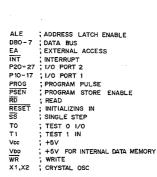
TST ; TEST

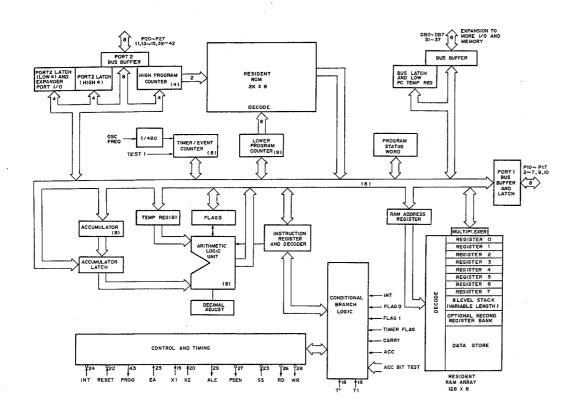
VOB ; BACKGROUND OUTPUT

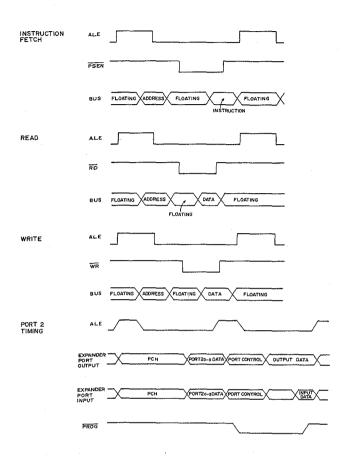
VOW ; CHARACTERS OUTPUT

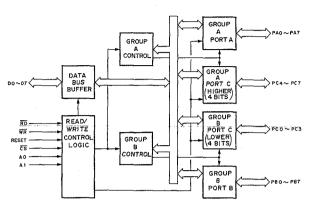




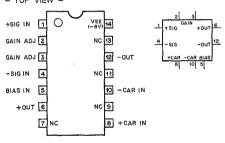




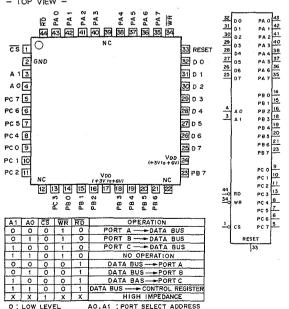




RC1496M (RAYTHEON) FLAT PACKAGE BALANCED MODULATOR/DEMODULATOR - TOP VIEW -



MSM82C55A-5GS (OKI) FLAT PACKAGE
C-MOS PROGRAMMABLE PERIPHERAL INTERFACE
- TOP VIEW -



AO,A1 ; PORT SELECT ADDRESS CS ; CHIP SELECT DO~7 ; DATA BUS

PAO~7; PORT A IN/OUT PBO~7; PORT B IN/OUT PCO~7; PORT C IN/OUT RD; READ WR; WRITE RC4556MA (RAYTHEON) FLAT PACKAGE OPERATIONAL AMPLIFIER (WIDE BAND, DECOMPENSATED) - TOP VIEW -



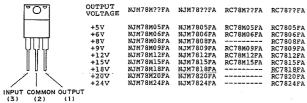
RC4558M (RAYTHEON) FLAT PACKAGE OPERATIONAL AMPLIFIER ~ TOP VIEW ~



O; LOW LEVEL 1; HIGH LEVEL X; DON'T CARE

RC78 ? ?FA (RAYTHEON)

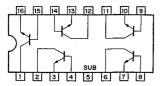
POSITIVE VOLTAGE REGULATOR - FRONT VIEW -





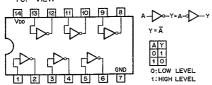
SL3127C (PLESSEY)

HIGH FREQUENCY TRANSISTOR ARRAY - TOP VIEW -

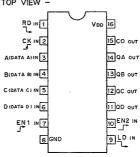


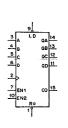
SN74HC04NS (Ti) ($V_{D0} = + 2$ to + 6V) FLAT PACKAGE

C-MOS HEX INVERTER - TOP VIEW -

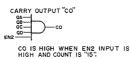


SN74HC163NS (TI) ($V_{00} = +2$ to +6V) FLAT PACKAGE C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER - TOP VIEW -





CON	TROL	INP	UTS	MODE
Rρ	LD	EN1	EN2	MODE
0	x	×	x	RESET (SYNCHRONOUS)
t	0	×	×	PRESET (SYNCHRONOUS)
1	1	0	Х	NO COUNT
1	1	Х	_0	NO COUNT
1	1	1		COUNT

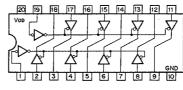


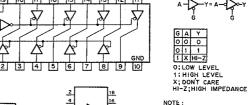
COUNT SEQUENCE										
COUNT			PUTS							
COUNT	QD	QC	QB	QA						
0	0	0	0	0						
1	0	0	0	1						
2	0	0	1	0						
3	0	0	1	1						
4	0	1	0	0						
. 5	0	1	0	.1						
6	0	1	1	0						
7	0	1	1	1						
8	1	0	0	0						
9	1	0	0	1						
10	1	0	1	0						
11	1_	0	1	1						
12	1	1	0	0						
13	1	1	0	1						
14	1	1	1	0						
15	1	1	1	1						

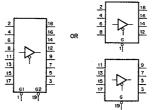
SN74HC244NS (TI) FLAT PACKAGE TC40H244F (TOSHIBA) FLAT PACKAGE

C-MOS BUS BUFFER WITH 3-STATE OUTPUTS

TOP VIEW -

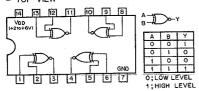




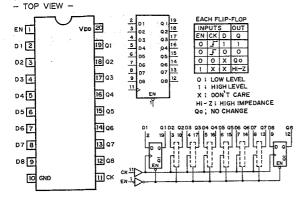




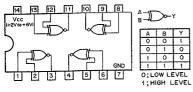
SN74HC266NS (TI) FLAT PACKAGE C-MOS 2-INPUT EXCLUSIVE-NOR GATE - TOP VIEW --



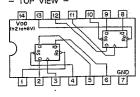
SN74HC574NS (TI) (V_{00} = +2 to +6V) FLAT PACKAGE C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP



SN74HC7266NS (TI) FLAT PACKAGE C-MOS 2-INPUT EXCLUSIVE-NOR GATES - TOP VIEW -

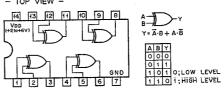


SN74HC74NS (TI) FLAT PACKAGE C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET - TOP VIEW -



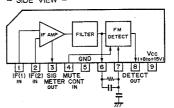


SN74HC86NS (TI) FLAT PACKAGE C-MOS EXCLUSIVE OR GATE - TOP VIEW -



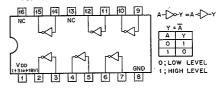
TA7303P (TOSHIBA)

FM IF AMPLIFIER DETECTOR - SIDE VIEW -



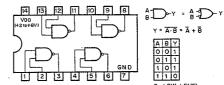
TC4049BF (TOSHIBA) FLAT PACKAGE

C-MOS INVERTING TYPE BUFFER/CONVERTER - TOP VIEW -

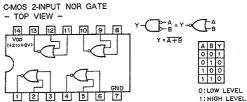


TC40H000F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT NAND GATE - TOP VIEW -

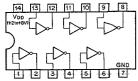


TC40H002F (TOSHIBA) FLAT PACKAGE



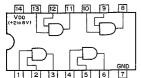
TC40H004F (TOSHIBA) FLAT PACKAGE

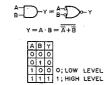
C-MOS INVERTER



A-\> O;LOW LEVEL 1;HIGH LEVEL

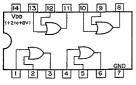
TC40H008F (TOSHIBA) FLAT PACKAGE C-MOS 2-INPUT POSITIVE-AND GATE - TOP VIEW -

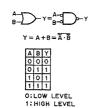




TC40H032F (TOSHIBA) FLAT PACKAGE

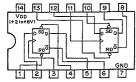
C-MOS 2-INPUT POSITIVE-OR GATE - TOP VIEW -

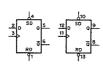




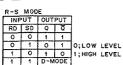
TC40H074F (TOSHIBA) FLAT PACKAGE

C-MOS HIGH SPEED D-TYPE FLIP-FLOP WITH DIRECT SET/RESET - TOP VIEW -

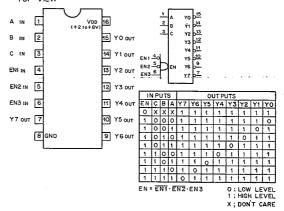






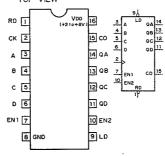


TC40H138F (TOSHIBA) FLAT PACKAGE C-MOS 3-TO-8-LINE DECODER/DEMULTIPLEXER



TC40H163F (TOSHIBA) FLAT PACKAGE

C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER — TOP VIEW —



м	OE	E S	ELE	CTIC	N								
	10:	VT. 1	NPU	TS	MODE								
F	O	LD	ENI	EN2	MODE								
	0	x	×	×	RESET (SYNCHRONOUS)								
	1	0	×	×	PRESET (SYNCHRONOUS)								
П	1	1	0	х	NO COUNT								
	1	1_	Х	0	NO COUNT								
	1	1	1	1	COUNT								
C	COUNT SEQUENCE												
Π.			-	TUC	PUTS								

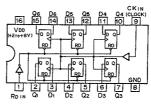
CARRY OUTPUT "CO"



COUNT	1 001 013				
COUNT	QD.	QC.	QB	QA	
0	0	0	0	0	
1	0	0	0	1	
2	0	0	1	0	
3	0	0	1	1	
13	Ť	i	ō	ī	
14	1	1	1	0	
15	-	1	1	1	
O:LOW LEVEL 1: HIGH LEVEL X:DON'T CARE					

CO GOES HIGH WHEN ENZ IS HIGH AND COUNT IS "15."

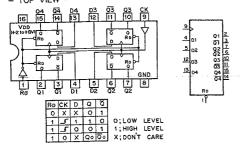
TC40H174F (TOSHIBA) FLAT PACKAGE C-MOS D-TYPE FLIP-FLOP - TOP VIEW --



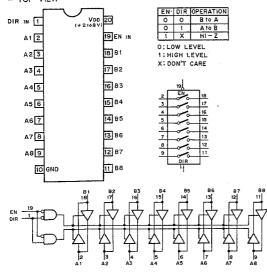


	T.	NPUT	s	OUTPUT	
i	CK	D	RD	Q	
	5	0	1	0	
	-	1	1	1	O; LOW LEVE
	٦	X	1	Qo	1; HIGH LEVE
ı	х	X	0	0	X; DON'T CARE

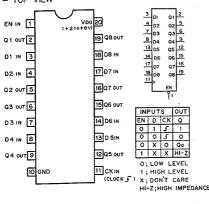
TC40H175F (TOSHIBA) FLAT PACKAGE C-MOS D-TYPE FLIP-FLOP WITH CLEAR - TOP VIEW -

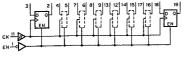


TC40H245F (TOSHIBA) FLAT PACKAGE
C.MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUT
- TOP VIEW -

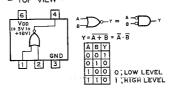


TC40H374F (TOSHIBA) FLAT PACKAGE C-MOS 3-STATE OUTPUTS OCTAL D-TYPE FLIP-FLOP - TOP VIEW -

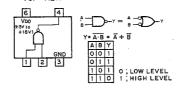




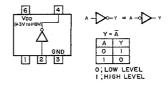
TC4S01F (TOSHIBA) FLAT PACKAGE C-MOS 2-INPUT NOR GATE - TOP VIEW -



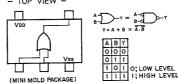
TC4S11F (TOSHIBA) FLAT PACKAGE C-MOS 2-INPUT HAND GATE - TOP VIEW -



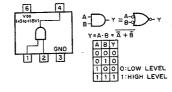
TC4S69F (TOSHIBA) FLAT PACKAGE TC4SU69F (TOSHIBA) FLAT PACKAGE C-MOS INVERTER BUFFER - TOP VIEW -



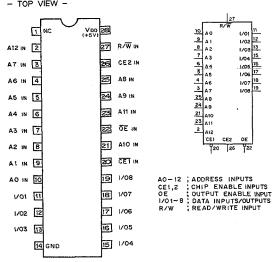
TC4S71F (TOSHIBA) FLAT PACKAGE C-MOS 2-INPUT OR GATE - TOP VIEW -



TC4S81F (TOSHIBA) FLAT PACKAGE C-MOS 2-INPUT AND GATE - TOP VIEW -

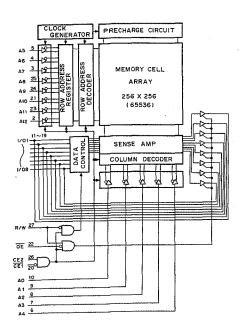


TC5564APL-15 (TOSHIBA) (ACCESS TIME = 150nS)
TC5564AFL-15 (TOSHIBA) (ACCESS TIME = 150nS) FLAT PACKAGE
C-MOS 8192 WORDx8-BIT STATIC RAM
- TOP VIEW -

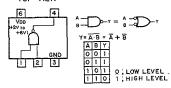


MODE	CE1	CE2	ŌĒ	R/W	
READ	0	1	0	1	DATA OUTPUTS
WRITE	0	1	×	0	DATA INPUTS
OUTPUT DISABLE	Х	х	1	х	HI-Z
	1	X	X	X	HI-Z
STANDBY	×	0	Х	X	HI-Z

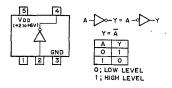
0 ; LOW LEVEL 1 : HIGH LEVEL X : DON'T CARE HI-Z ; HIGH IMPEDANCE



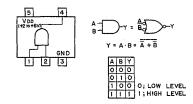
TC7S00F (TOSHIBA) FLAT PACKAGE C-MOS 2-INPUT NAND GATE - TOP VIEW -



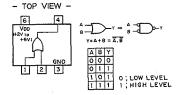
TC7S04F (TOSHIBA) FLAT PACKAGE C-MOS INVERTER -- TOP VIEW --



TC7S08F (TOSHIBA) FLAT PACKAGE C-MOS 2-INPUT AND GATE -- TOP VIEW --



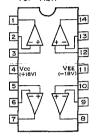
TC7S32F (TOSHIBA) FLAT PACKAGE C-MOS 2-INPUT OR GATE



TL062CP (TI)
TL062CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(JFET INPUT)
- TOP VIEW --



TL064CNS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
- TOP VIEW --



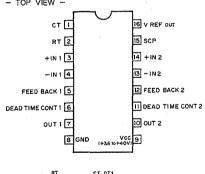
TL082CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
- TOP VIEW --

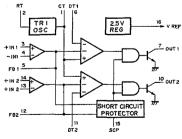


TL1451ACN (TI)

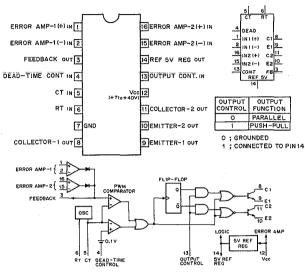
DUAL PWM POWER CONTROLLER

- TOP VIEW --



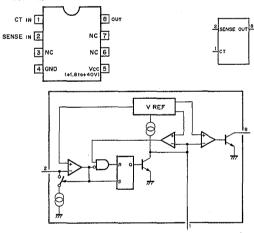


TL494CN (TI)
PWM POWER CONTROL
- TOP VIEW -



TL7700CPS (TI) FLAT PACKAGE

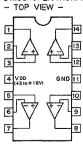
VARIABLE SUPPLY VOLTAGE SUPERVISOR - TOP VIEW -

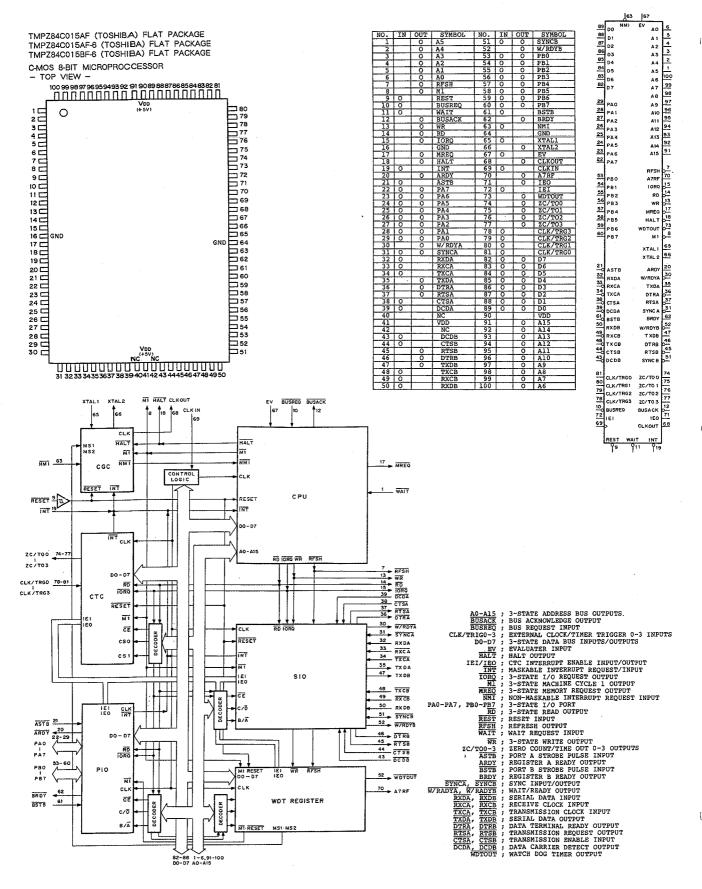


TLC27L2CPS (TI) FLAT PACKAGE OPERATIONAL AMPLIFIER - TOP VIEW --

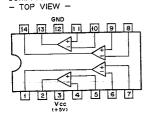


TLC27L4CNS (TI) FLAT PACKAGE C-MOS OPERATIONAL AMPLIFIER





uPC339G2 (NEC) FLAT PACKAGE COMPARATOR



uPC358G2 (NEC) FLAT PACKAGE DUAL OPERATIONAL AMPLIFIERS - TOP VIEW -



uPC393C (NEC) uPC393G2 (NEC) FLAT PACKAGE DUAL VOLTAGE COMPARATORS - TOP VIEW -



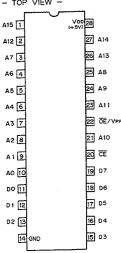
uPC812G2 (NEC) FLAT PACKAGE

OPERATIONAL AMPLIFIER (JFET INPUT)

- TOP VIEW -



uPD27C512G-20 (NEC) (ACCESS TIME = 200nS) FLAT PACKAGE C-MOS 512K(65,536x8 = 524,288)-BIT ONE TIME PROM - TOP VIEW -

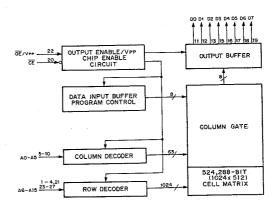


1	A15	D7	19
27	A14	D7	18
26	A13	D5	17
27 26 2 23 21 24	A12	D4	16
23	A11	03	15
21	A10	02	15 13 12
24	A9	01	12
25	A8	DO	
3 4 5	A7		
4	A6		
_5	A5		1
6	A4		
7	A3		ļ
-8-	A2		1
7 8 9	ΑI		
10	AO CE OE/VP		l
	20 22		,
			_

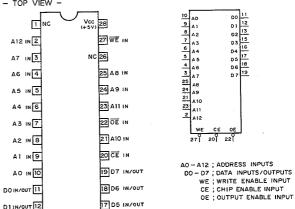
AO - A15; ADDRESS INPUTS GE; CHIP ENABLE INPUT DO- D7; DATA OUTPUTS GE; OUTPUT ENABLE INPUT VPP; PROGRAM POWER SUPPLY

An	ĈĒ	OE/Vpp	Voo	Dn	FUNCTION
AIN	0	0	+5V	DouT	READ
AIN	0	1	+5V	HI-Z	DISABLE
х	1	×			STANDBY
Ain	0	+ 12.5V	+6V	DIN	PGM
AIN	0	0	+6V	Dout	PGM VERIFY
×	1	+12.5V	+6V	HI-Z	PGM INH

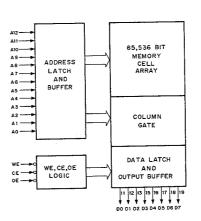
O; LOW LEVEL
1; HIGH LEVEL
HI-Z; HIGH IMPEDANCE
X; DON'T CARE



uPD28C64C-25 (NEC) (ACCESS TIME = 250nS)
C-MOS 64K (8Kx8) ELECTRICALLY ERASABLE PROM
- TOP VIEW -



15 D3 IN/OUT

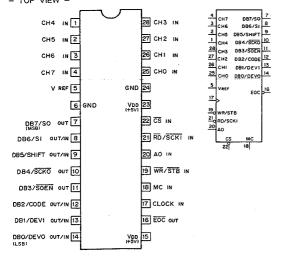


D2 IN/OUT 13

14 GND



C-MOS 10-BIT SUCCESSIVE COMPARATOR TYPE A/D CONVERTER - TOP VIEW -



AO ; CONTROL ADDRESS INPUT
CHO~7; ANALOG INPUT
CODE ; CODE SELECT (2'S COMPLEMENT/
BINARY) INPUT
CS ; CHIP SELECT INPUT
DBO~7; DATA BUS INPUT/OUTPUT

DEVO,
DEVI; CLOCK RATE SELECT INPUT
EOC ; CONVERSION ENDING SIGNAL
OUTPUT
MC ; MODE SELECT INPUT

; READ SIGNAL INPUT

; SERIAL CLOCK INPUT ; SERIAL CLOCK OUTPUT ; SHIFT SELECT (LSB FIRST/ SCKI SCKO SHIFT MSB FIRST)
; SERIAL INPUT
; SERIAL OUTPUT
; SERIAL OUTPUT ENABLE OUTPUT SI

SOEN STB ; ADDRESS WRITE STROBE SIGNAL

INPUT ; WRITE SIGNAL INPUT

20 16 EOC SUCCESSIVE COMPARATOR REGISTER RD/SCKI WR/STB SHIFT CONTROLLER 08 7/\$0 086/\$1 085/SHIFT 084/SCKO 3-STATE 083/SOEN 083/SOEN 082/CODE 081/DEV1 080/DEV0 COMPARATOR BUFFER STATUS ADDRESS LATCH ROGRAMABLE DIVIDER MULTI-PLEXER 10-BIT D/A

MC	MODE
0	SERIAL
-1	PARALLEL

PARALLEL MODE							
cs	WR	RD	AO	MODE			
1	X	X	X	HIGH IMPEDANCE			
0	1	1	Х	HIGH IMPEDANCE			
0	0	-1	0	*1 ANALOG CHANNEL SELECT			
0	0	1	1	#2 CODE SELECT/ #3 CLOCK RATE SELECT			
0	1	0	0	*4 LOW-BYTE DATA OUTPUT			
0	1	0	1	*4 HIGH-BYTE DATA OUTPUT			
0	٥	0	X	INHIBIT			

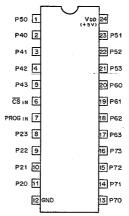
	LEVEL	x :	DONT	,

ب	LEAR	4666									
PAR	ALLEI	_ мо	DE								
ĈŜ	WR	RD	AO		MODE			*1 AN	ALOG	CHANN	EL
1	X	X	X	HIGH IMP	EDANCE			SEL2	SELI	SELO	MPX CHAN.
0	1	1	X	HIGH IMP	EDANCE			0	0	0	СНО
0	0	1	0	*1 ANALOG	CHANNE	EL SELE	CT	0	_0	1	CH1
				#2 CODE S	ELECT/			0	1	0	CH 2
0	0	יו	1	*3 CLOCK	RATE SE	ELECT		0	1	1	CH3
0	1	0	0	*4 LOW-BY	TE DAT	A OUTP	UT	1	0	0	CH4
0	1	0	1	*4 HIGH-B	YTE DAT	A OUTP	UT	_ 1	0	1	CH5
0	0	0	X	INHIBIT				1	1	0	CH6
			0:	LOW LEVE	L X:	דימסם	CARE	1	1	1 .	CH7
				HIGH LEVE							
*2	CODE	SEL	ECT		*3 CLC	CK RAT	E SELE	CT			
CODE CODE SELECT DEVI DEV O CLOCK RATE							7				
O BINARY DATA 0 0						1		7			
1 2'S COMPLEMENT DATA 0 1						1/	.5	7			
					1	0	1/	4			
1 1/8											

*4 LOW/HIGH-BYTE DATA								
	DB7	086	DB5	DB4	DB3	D8 2	DB 1	DB O
HIGH-BYTE	MSB	2ND	3RD	4TH	5TH	6TH	7TH	8TH
LOW- BYTE	9TH	0	0	0	0	0	0	0

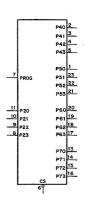
uPD82C43G (NEC) FLAT PACKAGE

C-MOS I/O PORT EXPANDER - TOP VIEW -



P4	3 5			2	P60	
ō5	N 6			15	P61	
ROG	IN 7			18	P62	
P2	3 8			13	P63	
P2	2 9			i i	P73	
P2	1 10			15	P72	
P2	0 11			14	P71	
	12	GND		12	P70	
ONT	ROL /	AND F	PORT	ADDRESSI	NG	_
P23	P22	P21	P20	PORT	CONTROL	1
0	0	0	0	4]	l
0	0	0	1	5	READ	l
0	0	1	0	6] ""	
0	0	1	1	7	1	i
0	1	0	α	4		i

	112	JP70								
TNC	INTROL AND PORT ADDRESSING									
23	P22	P21	P20	PORT	CONTROL					
0	0	0	0	4		ı				
	0	0	1	5	READ					
0	0	1	0	6	, NCAO					
0	0	1	1	7		ı				
0	1	0	0	4						
0	1	0	1	5	WRITE					
0	1	1	0	6	WRITE					
0	1	1	1	7						
1	0	0	0	4						
1	0	.0	1	5	OR					
1_	0	1	0	6	} ~~					
	0	1	1	7	1					
1_	1	0	0	4	,					
1	1	0	_	5	AND					
1	1	1	0	6	AND					
1	1	1	1	7	<u> </u>					



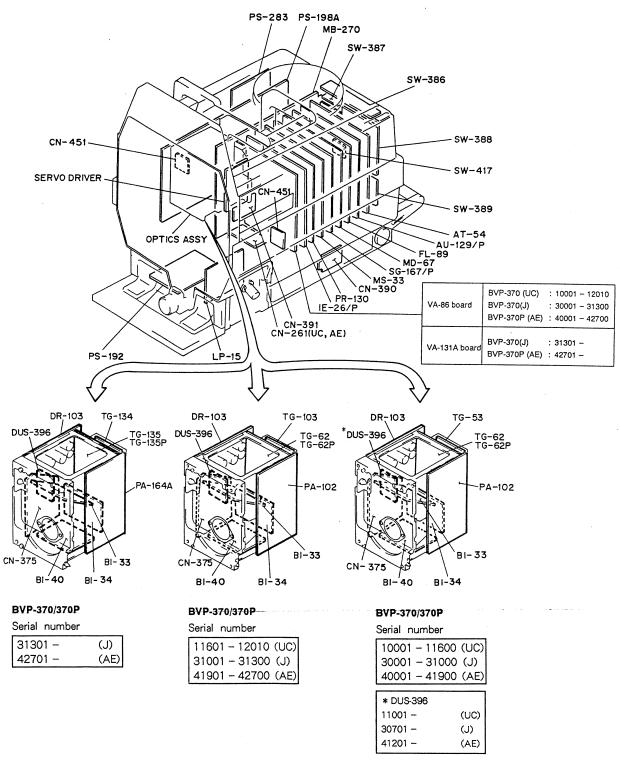
PROG; PROGRAM PULSE INPUT CS; CHIP SELECT INPUT P20~P23; 1/0 PORT2 (FOR CPU) P40~P43; 1/0 PORT4 P50~P53; 1/0 PORT5 P60~P63; 1/0 PORT6 P70~P73; 1/0 PORT7

ADDRESS DECODER LATCH > PORT 4 INSTRUC DECODER MUX LATCH TEMPORARY REGISTER INPUT **SUFFER** PROG CONTROL LATCH > PORT 7 RESET CIRCUIT



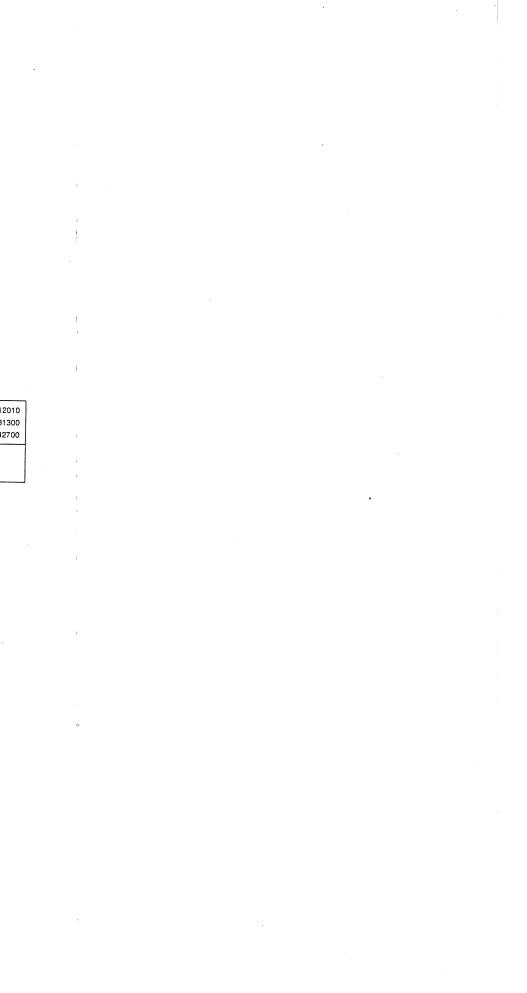
SECTION C SCHEMATIC DIAGRAMS AND BOARD ILLUSTRATION

BOARD LAYOUT

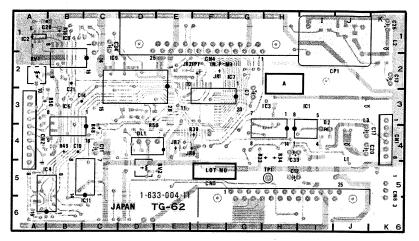


C-1

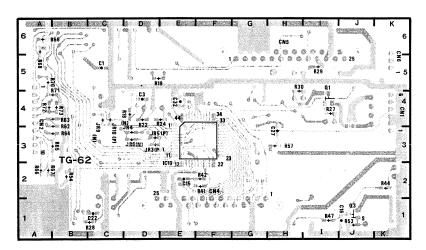
BVP-370/P



Serial No. 10001 - 10410 (UC) 30001 - 30305 (J) 40001 - 40420 (AE)



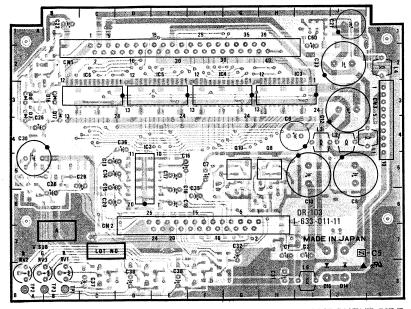
1-633-004-11 COMPONENT SIDE



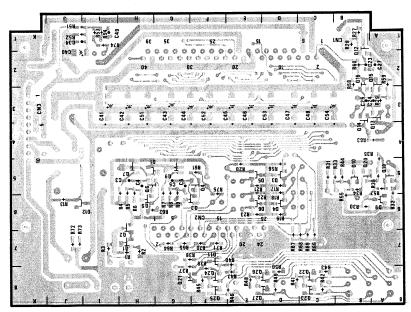
1-633-004-11 SOLDERING SIDE

DR-103 BOARD

Serial No. 10001 - 10410 (UC) 30001 - 30305 (J) 40001 - 40420 (AE)

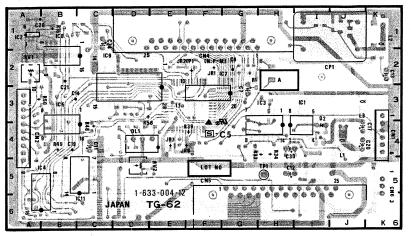


1-633-011-11 COMPONENT SIDE

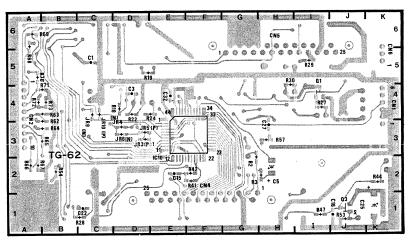


1-633-011-11 SOLDERING SIDE

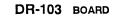
Serial No. 10501 - 10800 (UC) 30401 - 30600 (J) 40501 - 40900 (AE)



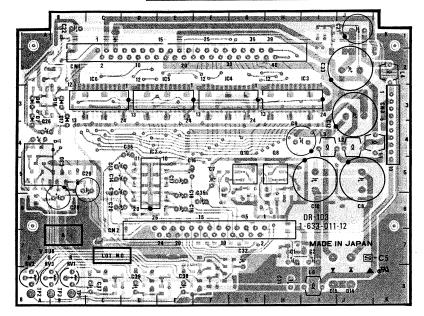
1-633-004-12 COMPONENT SIDE



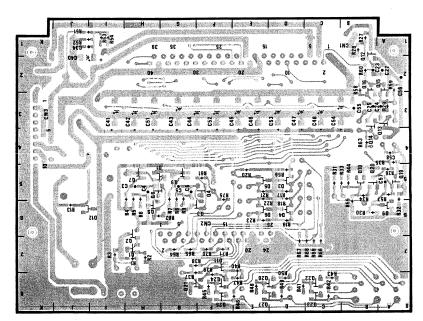
1-633-004-12 SOLDERING SIDE



Serial No. 10501 – 10800 (UC) 30401 – 30600 (J) 40501 – 40900 (AE)

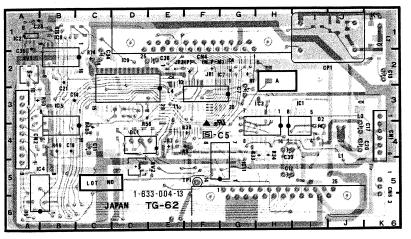


1-633-011-12 COMPONENT SIDE

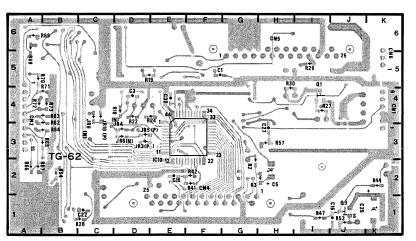


1-633-011-12 SOLDERING SIDE

Serial	No.	10801 -	(UC	;)
		30601 -	(J)	
		40901 -	(AE	(



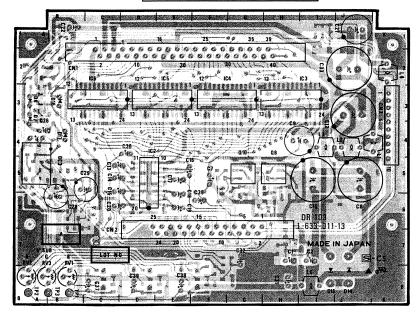
1-633-004-13 COMPONENT SIDE



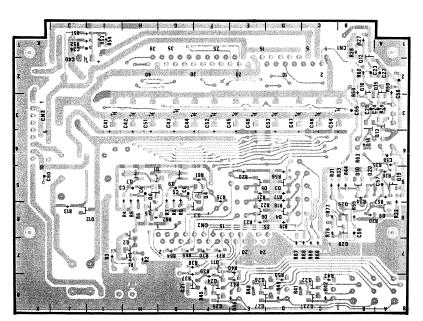
1-633-004-13 SOLDERING SIDE



Serial No. 10801 - 11100 (UC) 30601 - 30800 (J) 40901 - 41300 (AE)

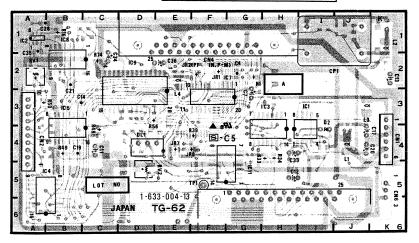


1-633-011-13 COMPONENT SIDE

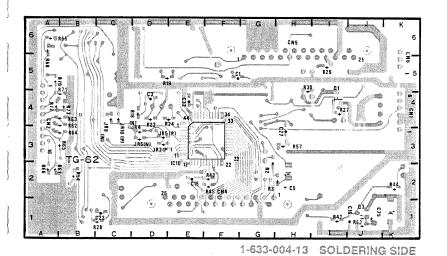


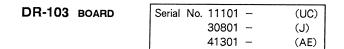
1-633-011-13 SOLDERING SIDE

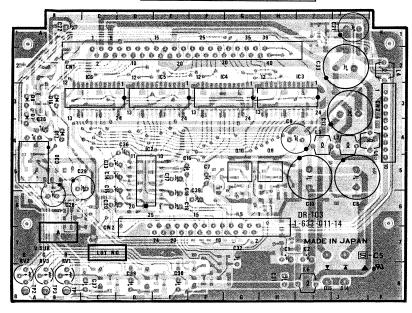
	Serial	No.	10801	_	(UC)
			30601	_	(J)
Ì			40901		(AF)



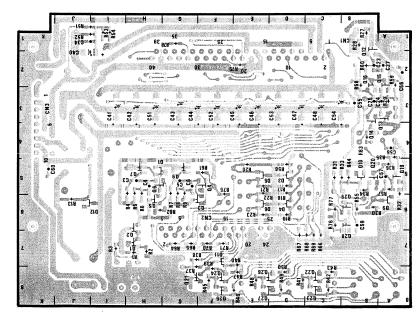
1-633-004-13 COMPONENT SIDE







1-633-011-14 COMPONENT SIDE

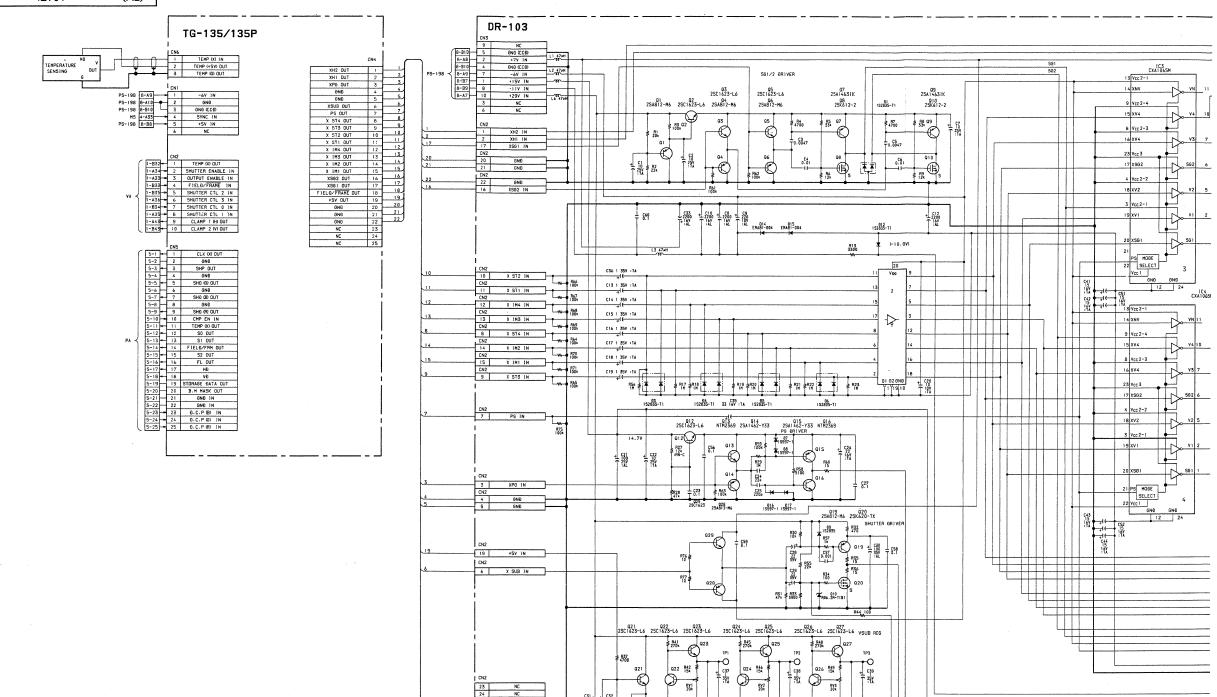


1-633-011-14 SOLDERING SIDE

CCD BLOCK (1/2) TG-134 BOARD TG-135/135P BOARD

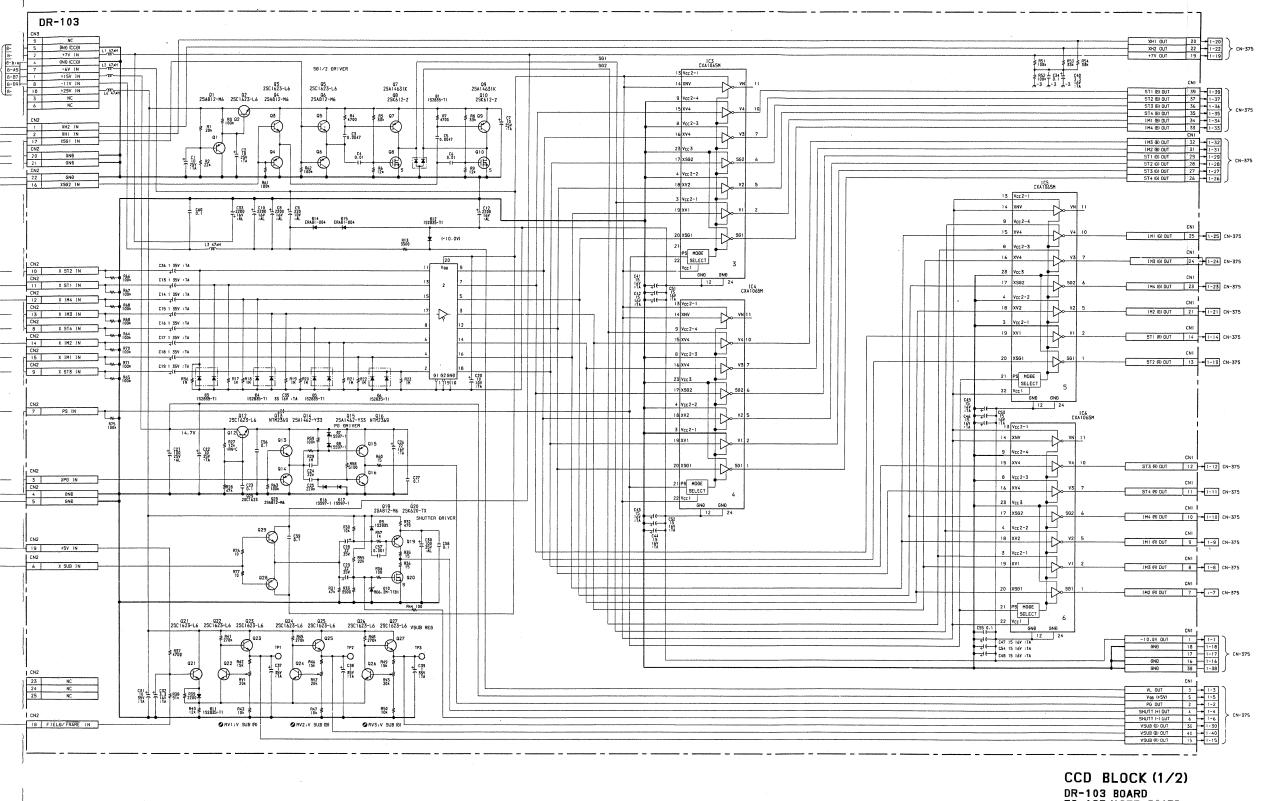
DR-103 BOARD

Serial No. 31301 - (J) 42701 - (AE)



R40 ≥ 011 12× 152835-T1 R43 ≥ 10× =

 (1)



TG-135/135P BOARD

BVP-370 (J) BVP-370A (UC) BVP-370P (AE) B-98VP370/2-CC08LOCK/HEI

C-6 (b)

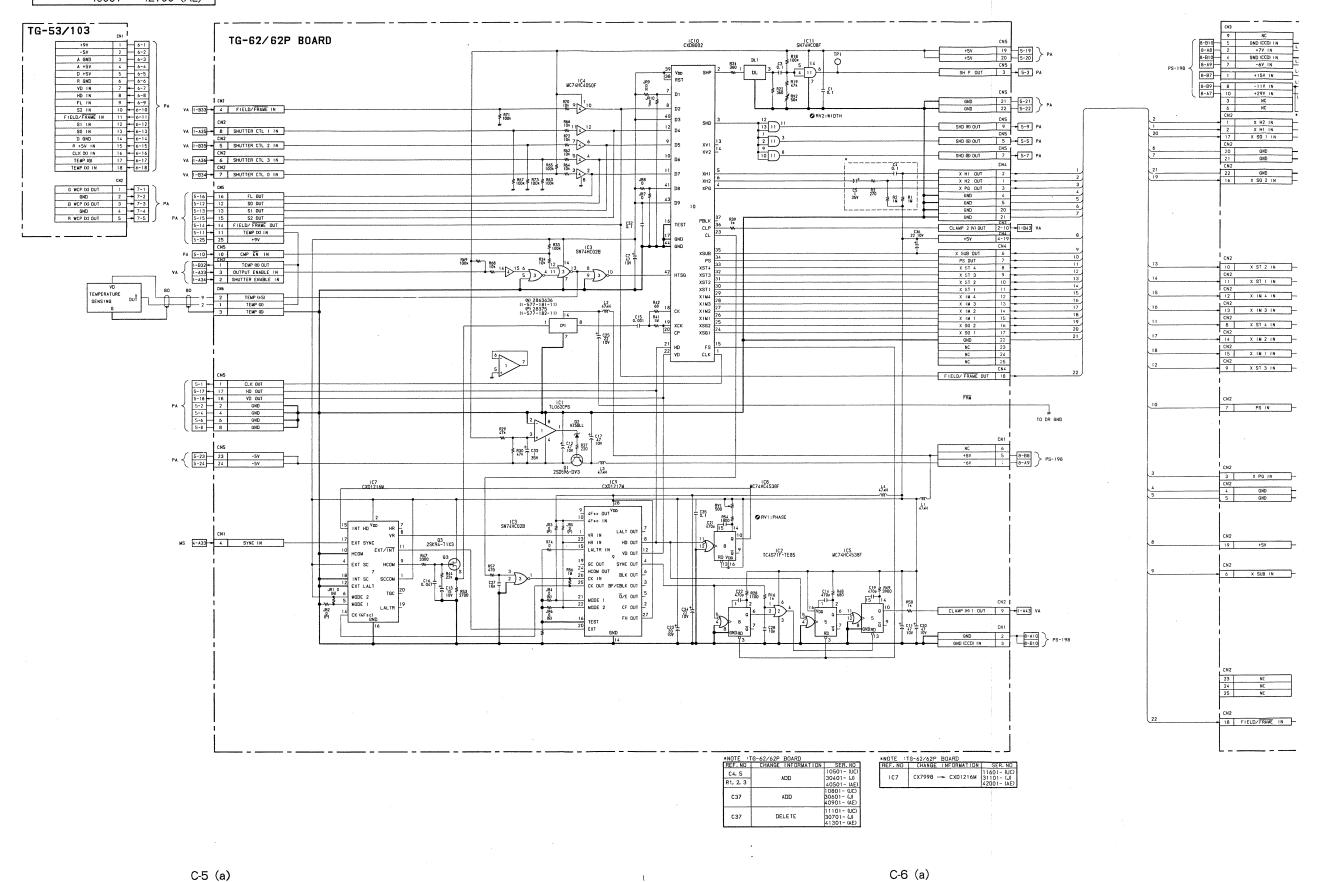
C-7 (b)

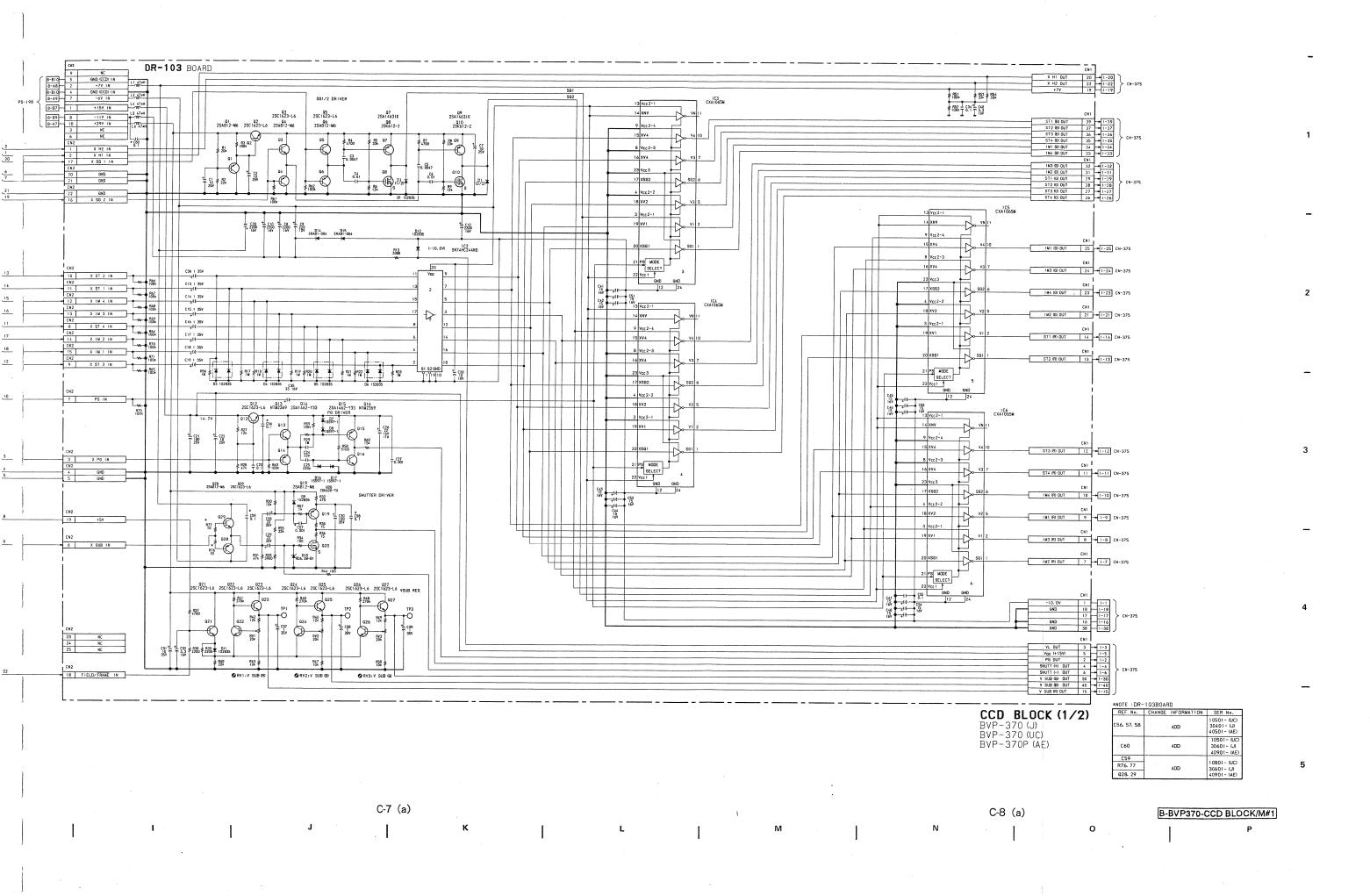
CCD BLOCK (1/2) TG-53/103 BOARD TG-62/62P BOARD

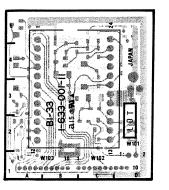
DR-103 BOARD

BVP-370/P

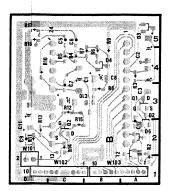
Serial No. 10001 - 12010 (UC) 30001 - 31300 (J) 40001 - 42700 (AE)







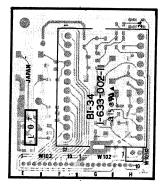
1-633-001-11 COMPONENT SIDE



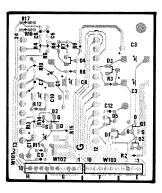
1-633-001-11 SOLDERING SIDE

BI-34 BOARD

Serial No. 10001 - 10410 (UC) 30001 - 30305 (J) 40001 - 40420 (AE)



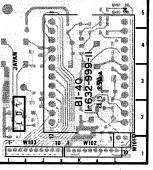
1-633-002-11 COMPONENT SIDE



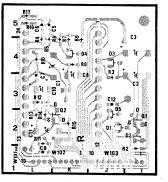
1-633-002-11 SOLDERING SIDE

BI-40 BOARD

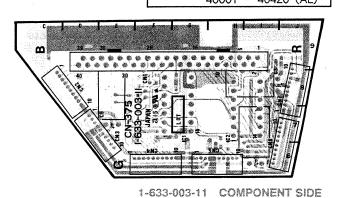
Serial No. 10001 - 10410 (UC) 30001 - 30305 (J) 40001 - 40420 (AE)

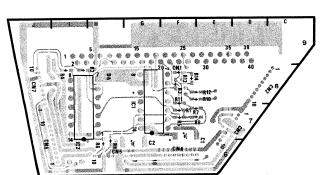


1-632-999-11 COMPONENT SIDE



1-632-999-11 SOLDERING SIDE





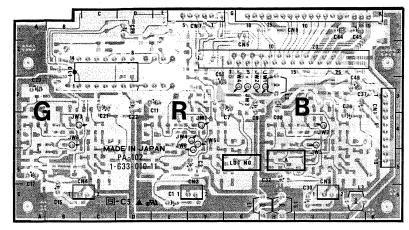
1-633-003-11 SOLDERING SIDE

BI-33, BI-34, BI-40 CN-375, PA-102 CCD BLOCK (2/2)

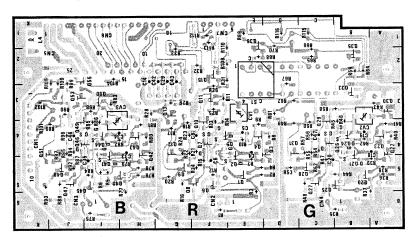
PA-102 BOARD

CCD BLCOK (2/2) BI-33, BI-34, BI-40 CN-375, PA-102

Serial No. 10001 - 10410 (UC) 30001 - 30305 (J) 40001 - 40420 (AE)

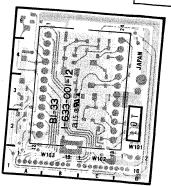


1-633-010-11 COMPONENT SIDE

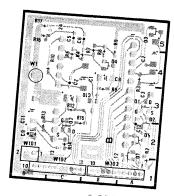


1-633-010-11 SOLDERING SIDE

Serial No. 10501 – 10800 (UC) 30401 – 30600 (J) 40501 – 40900 (AE)



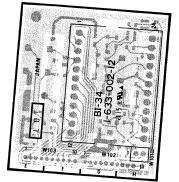
1-633-001-12 COMPONENT SIDE



1-633-001-12 SOLDERING SIDE

BI-34 BOARD

Serial No. 10501 – 10800 (UC) 30401 – 30600 (J) 40501 – 40900 (AE)



1-633-002-12 COMPONENT SIDE



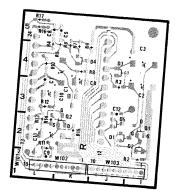
1-633-002-12 SOLDERING SIDE

BI-40 BOARD

Serial No. 10501 – 10800 (UC) 30401 – 30600 (J) 40501 – 40900 (AE)



1-632-999-12 COMPONENT SIDE



1-632-999-12 SOLDERING SIDE

C-10 (b)

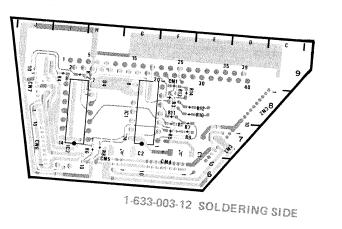
BI-33, BI-34, BI-40 CN-375, PA-102 CCD BLOCK (2/2)



CCD BLC

PA-10:





Serial No. 10501 – 10800 (UC) 30401 – 30600 (J) 40501 – 40900 (AE)

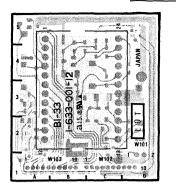
1-633-003-12 COMPONENT SIDE

CN-375 BOARD

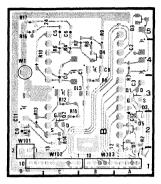


PA-102

Serial No. 10801 - 11100 (UC) 30601 - 30800 (J) 40901 - 41300 (AE)



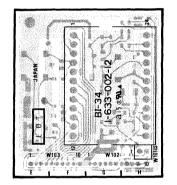
1-633-001-12 COMPONENT SIDE



1-633-001-12 SOLDERING SIDE



Serial No. 10801 - 11100 (UC) 30601 - 30800 (J) 40901 - 41300 (AE)



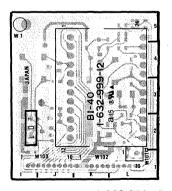
1-633-002-12 COMPONENT SIDE



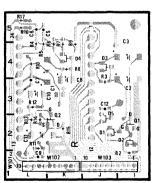
1-633-002-12 SOLDERING SIDE

BI-40 BOARD

Serial No. 10801 - 11100 (UC) 30601 - 30800 (J) 40901 - 41300 (AE)



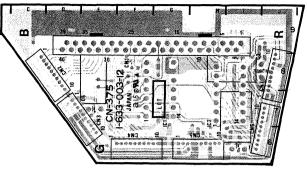
1-632-999-12 COMPONENT SIDE



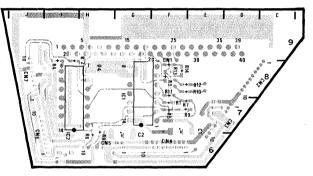
1-632-999-12 SOLDERING SIDE

CN-375 BOARD

Serial No. 10801 - (UC) 30601 - (J) 40901 - (AE)



1-633-003-12 COMPONENT SIDE



1-633-003-12 SOLDERING SIDE

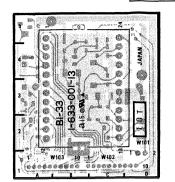




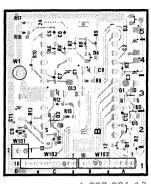
PA-102

BI-33 BOARD

Serial	No.	11101	-	(UC)
		30801	-	(J)
		41301	_	(AE)



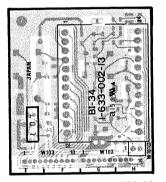
1-633-001-13 COMPONENT SIDE



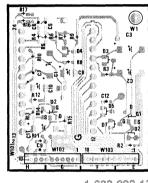
1-633-001-13 SOLDERING SIDE

BI-34 BOARD

Serial	No.	11101	_	(UC)
		30801		(J)
		41301	-	(AE)



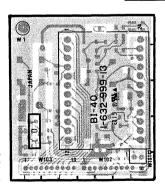
1-633-002-13 COMPONENT SIDE



1-633-002-13 SOLDERING SIDE

BI-40 BOARD

Serial	No.	11101	_	(UC)
		30801	_	(J)
		41301		(AE)



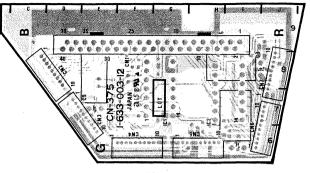
1-632-999-13 COMPONENT SIDE



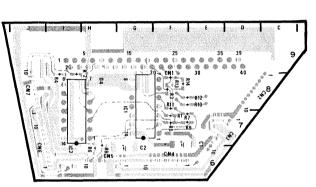
1-632-999-13

CN-375 BOARD

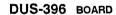
Serial	No.	10801	_	(UC)
		30601		(J)
		40901		(AE)



1 633-003-12 COMPONENT SIDE



1-633-003 12 SOLDERING SIDE

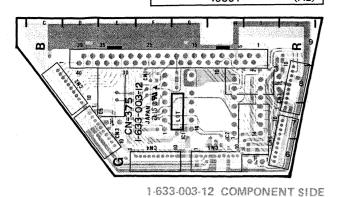


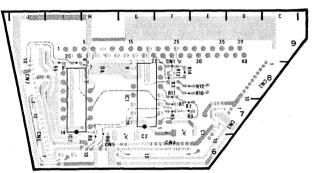
Serial	No.	11001	_	(UC)
		30701	_	(J)
		41201	_	(AE)



1-638-782-11 COMPONENT SIDE

Serial No. 10801 -	(UC)
30601 -	(J)
40001	(AE)

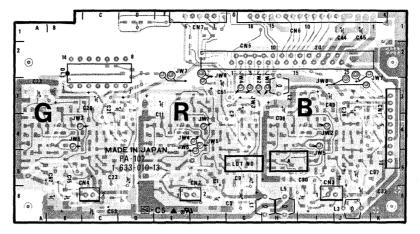




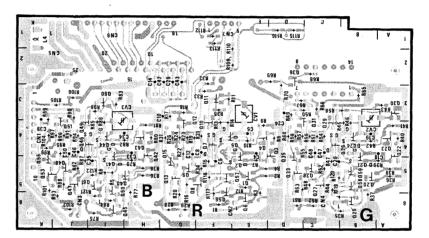
1-633-003-12 SOLDERING SIDE

PA-102 BOARD

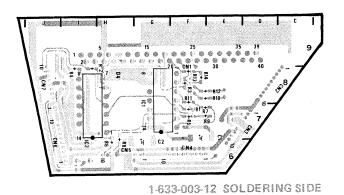
Serial No. 10801 - (UC) 30601 - (J) 40901 - (AE)



1-633-010-13 COMPONENT SIDE



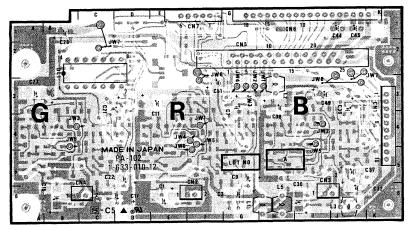
1-633-010-13 SOLDERING SIDE



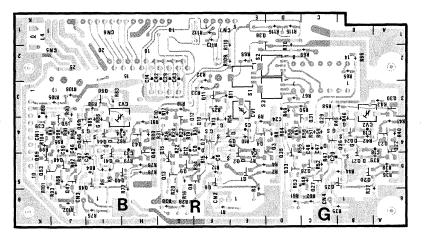
BI-33, BI-34, BI-40 CN-375, PA-102 CCD BLOCK (2/2)

PA-102 BOARD

Serial No. 10501 - 10800 (UC) 30401 - 30600 (J) 40501 - 40900 (AE)

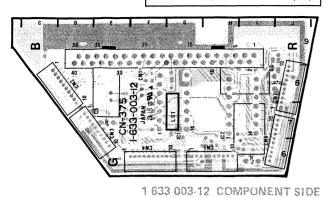


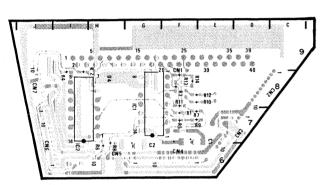
1-633-010-12 COMPONENT SIDE



1-633-010-12 SOLDERING SIDE

Serial	No.	10801	 '	(UC)
		30601	_	(J)
		40901		(AE)

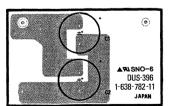




1-633-003-12 SOLDERING SIDE

DUS-396 BOARD

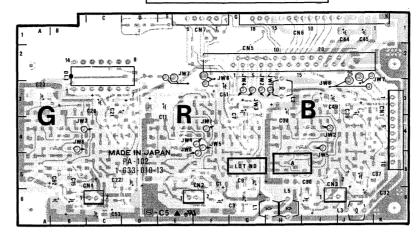
Serial	No.	11001 -	(UC)
		30701 -	(J) (AE)
		41201 -	(AE)



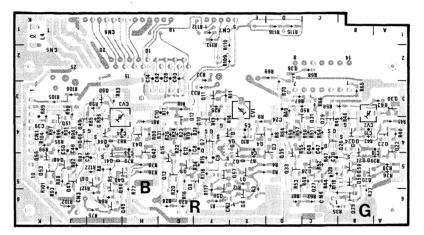
1-638-782-11 COMPONENT SIDE

PA-102 BOARD

Serial No. 10801 - 12010 (UC) 30601 - 31300 (J) 40901 - 42700 (AE)



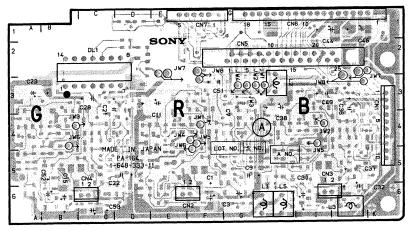
1-633-010-13 COMPONENT SIDE



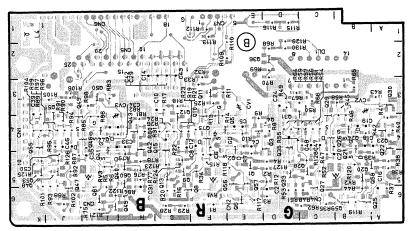
1-633-010-13 SOLDERING SIDE

PA-164A BOARD

Serial N	۱ ٥.	31301	.—	(J)
		42701	_	(AE)



1-648-333-11 COMPONENT SIDE



1-648-333-11 SOLDERING SIDE

CCD BLOCK (2/2)

BI-40 BOARD CN-375 BOARD

DUS-396 BOARD

PA-102 BOARD

BI-33 BOARD
BI-34 BOARD

Serial No. 10001 - 12010 (UC) 30001 - 31300 (J) 40001 - 42700 (AE) BI-33, BI-34, BI-40

CN-375, DUS-396, PA-102

CCD BLOCK (2/2)

3-1 R15 3300 7-6 8 2-6 7-7 -- 8 -- 2-7 ---[6-1]-- 1 --[1-1]--DR [1-15] + 15 V SUB (R) IN HD74ACO4F HD74ACO4F 7-8 - 8 - 2-8 DR 1-19 19 DR 1-20 20 DR 1-22 DS ISSI23 R11 10 5 5 TG-62/62P 5-6 6 TB-62/62P 5-7 7 SHD (B) IN BI-40 (R) ₹ R14 2 G CCD OUT OO IN 3-1 3-2 5-6 8 2-6 5-7 8 - 2-7 R3 T D3 11 T 152835 DR 1-30 → 30 V SUB (B) IN 4-1-1-1-1-TG-53 2-1 5-8 8 2-8 5-3 — 8 — 2-3 — DS 188123 TG-62/62P 5-4 Te-62/62P 5-5 4 GND CNS
Te-62/62P 5-5 5 SHD (g) IN B1-34 (G) ₹ R14 3-6 8 2-6 3-7 8 - 2-7 DR 1-40 40 V SUB (B) IN TG-53 2-5 5 R WCP CO IN 3-8 - 8 - 2-8 -3-3 8 2-3 DR 1-2 2 PG IN CN1 DUS-396 DR 1-5 5 VED (+15V) TG-62/62P

5-2
5-8 B1-33 (B) C-14 (a)

CCD BLOCK (2/2) BI-33, BI-34, BI-40 CN-375, DUS-396, PA-102

BVP-370/P C-13 (a)

C

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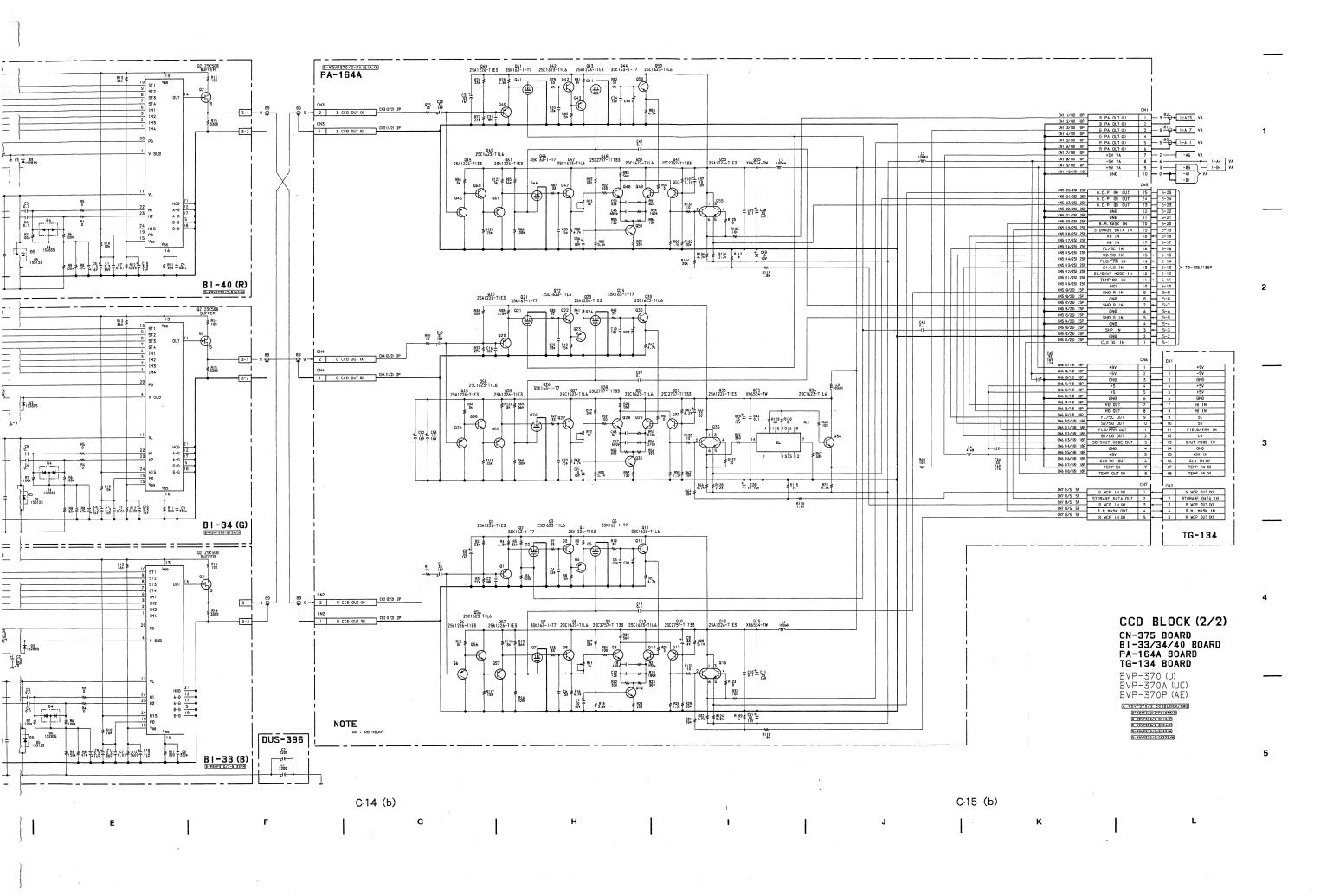
Į F

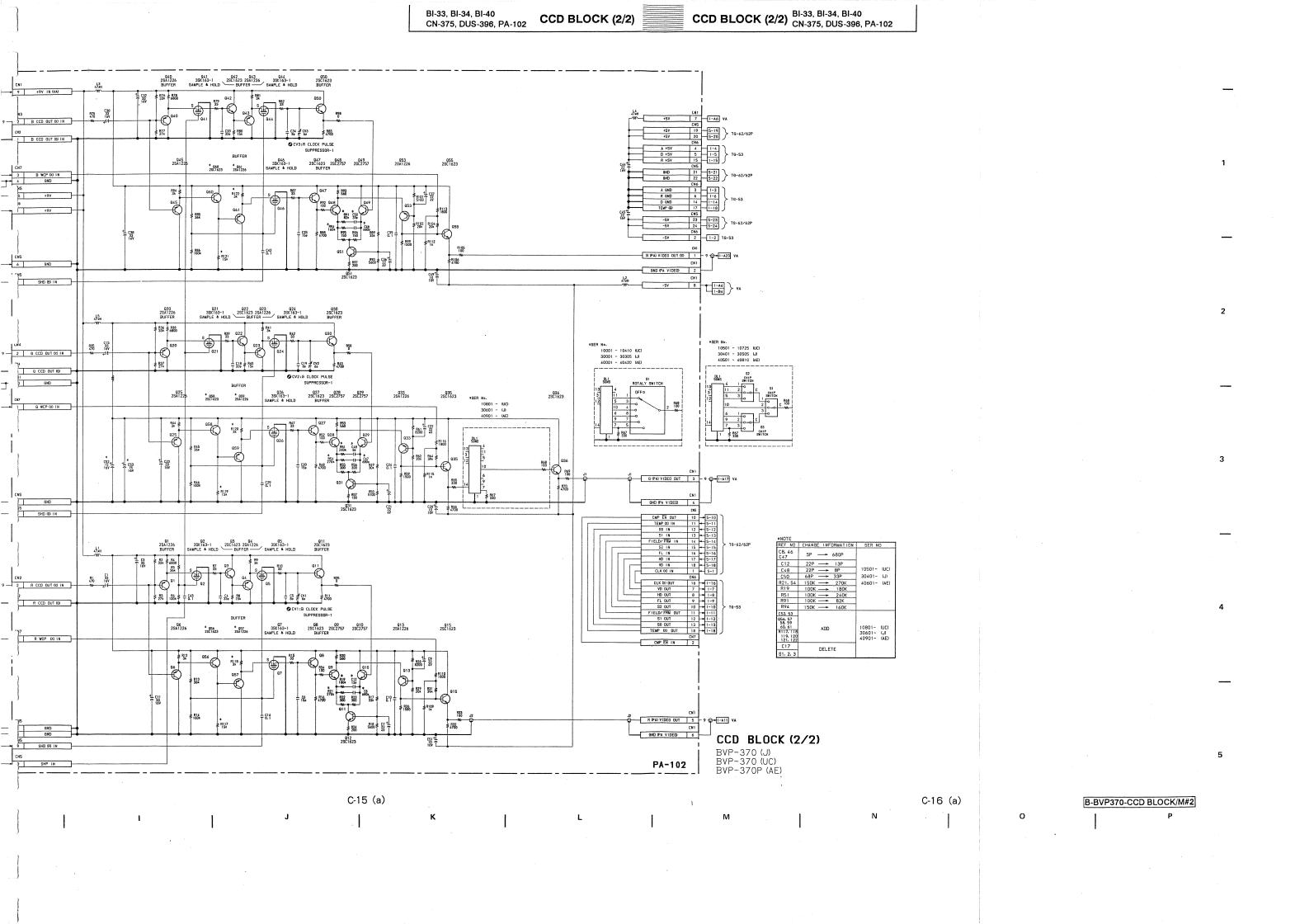
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CCD BLOCK (2/2) BI-33, BI-34, BI-40 CN-375, DUS-396, PA-164A CN-375, DUS-396, PA-164A CCD BLOCK (2/2) BI-33, BI-34, BI-40 CCD BLOCK (2/2) Serial No. 31301 -(J) 42701 -(AE) BI-33 BOARD BI-34 BOARD B-YBVP370/2-PA164A/H BI-40 BOARD CN-375 B-YBVP370/2-CN375/M H13 36k ≢ ₹ 814 100 R78 ■ Q41 CN-375 BOARD DUS-396 BOARD PA-164A BOARD BR 1-15 + 15 V SUB 60 IN - CNI (6/14)
BR 1-19 + 19 + 77V 2-7 ₹ R3 ★ 152835 1-1 2-8 2-3 BR 1-20 - 20 ĐR [1-22] CNI (10/14) C36+1 R99 ≠R182 05 152835 0.1 195123 R16 = R17 = R104 \$ 150 + 19, + 53 + 55 + 0.71 + 812 + 518 BI-40 (R) Q1 25K620 ≢ 1166 CN4 2 6 CCD OUT (X) CN4 (2/2) 2P ≢ RIS \$3300 2-6 35K163-1-17 027 25C1623-T1L6 25C2757-T1T33 25C1623-T1L6 2-7 ≢ 853 560 OR 1-30 0 V SUB (G) 1N R59 = R62 05 1S 1SS123 1501 \$ 170 \$ 250 \$ 250 \$ 250 \$ 250 \$ 250 3 29C1623-T1L6 BI-34 (G) ₹ R15 3300 ₹ R3 ★152835 CN1 (14/14)

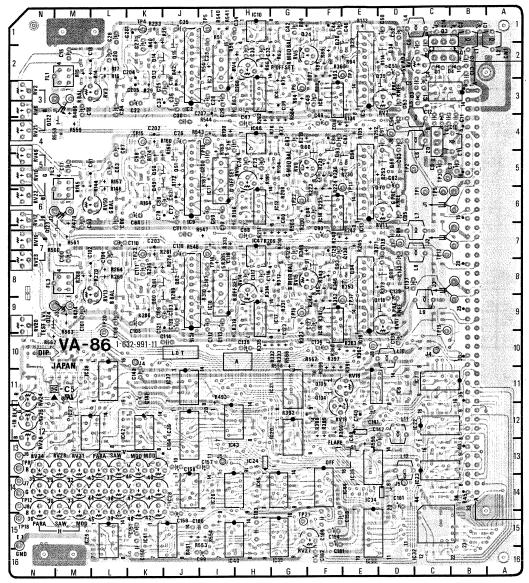
GR 1-40 40 V SUB (B) IN RD6. 2H-T1B1 OR 1-2 2 CN1 (2/14) NOTE 152835 DUS-396 2200 OR 1-5 5 VOO (+15V) BI-33 (B) C1 2200 C-14 (b) C-13 (b) BVP-370/P





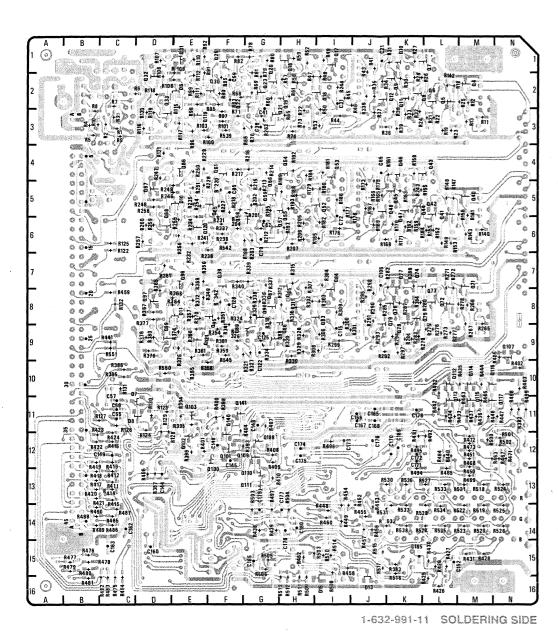
VA-86 BOARD

Serial No. 10001 - 10210 (UC) 30001 - 30205 (J) 40001 - 40210 (AE)



1-632-991-11 COMPONENT SIDE

C-18 (a)



VA-86 1-632-991-11

		-					
D7 D8 D10 D11 D13 D15	C-2 C-4 D-3 B-2 E-2 C-10 C-11 E-5 E-8 J-16	Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18	K-2 J-2 I-2 I-1 H-1	Q82 Q83 Q84 Q85 Q86 Q87 Q88 Q89 Q90 Q91 Q93 Q94 Q95	K-8 J-8 I-8 I-7 H-9 G-8 G-9 F-9 G-8 G-8 F-8 F-8	RV26 RV27 RV28 RV29 RV30 RV31 RV32 RV33 RV34 RV35 RV36 RV37 RV38 RV39	N-13 G-16 M-13 N-14 N-14 M-13 M-14 N-14 N-14 N-15
E1	N-15	Q19 Q20	H-2 G-1	Q96 Q97	E-7 D-8	RV40 RV41	K-14 K-14
FL1 FL2 FL3	N-2 N-5 N-8	Q20 Q21 Q22 Q23 Q24	G-3 F-2 G-2	Q98 Q99	D-8 D-9 F-13 F-12	RV42 RV43 RV44 RV45	K-15 L-14 L-14 M-15
IC1 IC2 IC3 IC4 IC5	I-2 G-3	Q29 Q30	F-1 F-1 E-2 F-2 E-1	Q102 Q103 Q104 Q105 Q107	E-11 F-11	RV46 RV47 RV48 RV49 RV50	K-13 K-14 K-15 N-5 L-6
IC6 IC7	F-3	۵32	D-2 D-2	Q108 Q109	G-12 F-12	S1	E-13
IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18 IC19 IC20 IC21 IC22 IC23 IC24 IC25 IC26 IC27 IC28 IC36 IC37 IC38 IC34 IC35 IC34 IC35 IC34 IC35 IC36 IC37 IC38 IC39 IC40 IC41 IC42 IC43 IC44 IC45 IC46 IC47 IC48	J-6 H-1 I-6 G-7 F-6 J-8 G-9 E-10 C-12 C-14 H-13 M-14 D-16 E-13 J-11 M-11 G-16 F-12 J-11 M-11 G-16 F-12 J-11 M-11 G-16 F-12 J-11 M-12 J-11 M-12 J-12 H-13 H-13 H-14 H-13 H-14 H-15 H-16 H-17 H-17 H-18 H-18 H-19 H-19 H-19 H-19 H-19 H-19 H-19 H-19	Q34 Q35 Q39 Q40 Q41 Q42 Q43 Q44 Q45 Q46 Q47 Q48 Q49 Q50 Q51 Q52 Q53 Q56 Q57 Q58 Q55 Q60 Q61 Q63 Q64 Q65 Q66 Q67 Q68 Q69 Q70 Q71 Q72 Q73 Q74 Q75 Q76	D-2 FM-1-5 KK-1-5 KK-1-5 KKKKKKKK-5 FF-5 FF-5 FF-5 DD-1-8 KKKKKKKKKKK FF-5 FF-5 FF-7 BF-8 FF-7 BF-8 FF-7 BF-8 FF-7 BF-8 FF-8	Q110 Q111 Q1112 Q113 Q114 Q115 Q116 Q117 Q118 Q120 Q121 Q122 Q123 Q124 Q140 Q141 RV1 RV2 RV3 RV4 RV5 RV6 RV7 RV8 RV9 RV10 RV11 RV12 RV11 RV12 RV13 RV14 RV15 RV16 RV17 RV17 RV18 RV17 RV18 RV18 RV19 RV10 RV11 RV12 RV13 RV14 RV15 RV16 RV17 RV17 RV18 RV19 RV19 RV10 RV11 RV11 RV12 RV13 RV14 RV15 RV16 RV17 RV17 RV18 RV18 RV19 RV10 RV11 RV11 RV11 RV12 RV13 RV14 RV15 RV16 RV17 RV17 RV17 RV18 RV18 RV19 RV10 RV11 RV11 RV11 RV11 RV11 RV11 RV11	G-13 G-13 G-13 L-10 L-11 M-10 M-11 M-10 N-11 D-9 E-9 N-4 N-7 N-9 F-11 D-2 N-3 L-2 N-3 L-2 N-3 D-5 N-5 N-6 L-8 R-8 N-7 D-9 E-11 F-12 N-7 N-9 E-11 F-12 N-3 N-7 N-9 F-11 N-3 N-4	TP1 TP2 TP3	C-6 D-5 C-5 K-1 I-1 G-3 E-2 N-13 C-4 E-5 N-14 C-7 I-7 K-4 G-9 N-15 C-9 L-9 G-15 G-6
Q1 Q2 Q3 Q4	B-2 C-4 C-1 M-2	Q77 Q78 Q79 Q80	K-7 K-9 K-8 K-9	RV22 RV23 RV24 RV25	N-6 N-7 N-11 N-12		

VA-86 1-

CN1

D2 D3 D4 D6 D7 D8 D10 D11

D13 D16 D17

D18 D19 D20 D21

E1 E2

FL1 FL2 FL3

IC1 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13

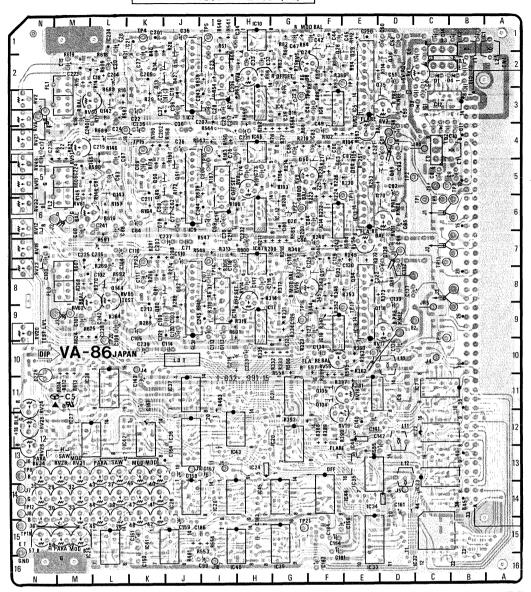
IC14 IC15 IC16 IC17 IC18 IC19

IC20 IC21 IC22 IC23 IC24 IC25 IC26 IC27 IC28 IC32 IC33 IC34 IC35 IC36 IC37 IC37 IC39 IC39

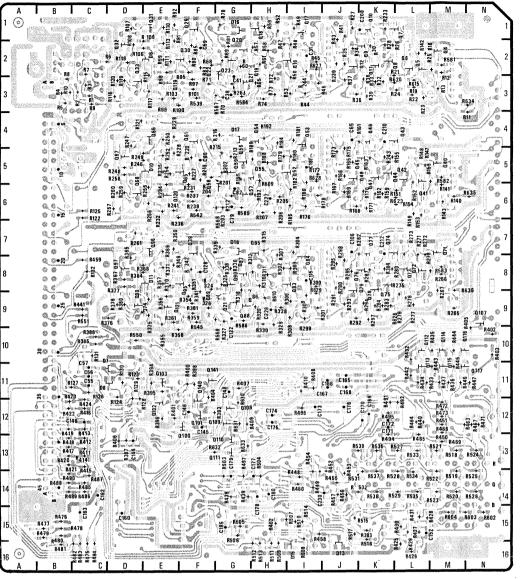
IC40 IC41 IC42 IC43 IC44 IC45 IC46 IC47 IC48

Serial No. 11101 - 12010 (UC)

30801 - 31300 (J) 41301 - 42700 (AE)

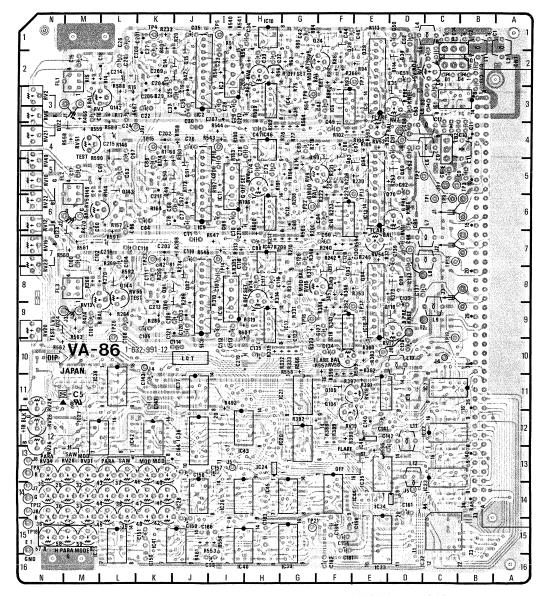


1-632-991-15 COMPONENT SIDE

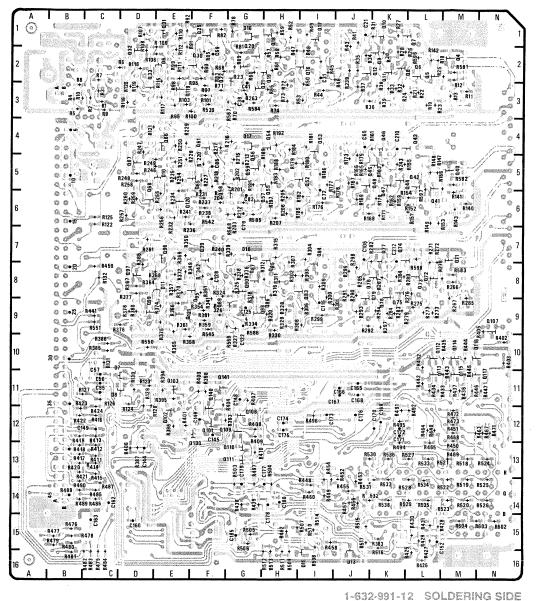


1-632-991-15 SOLDERING SIDE

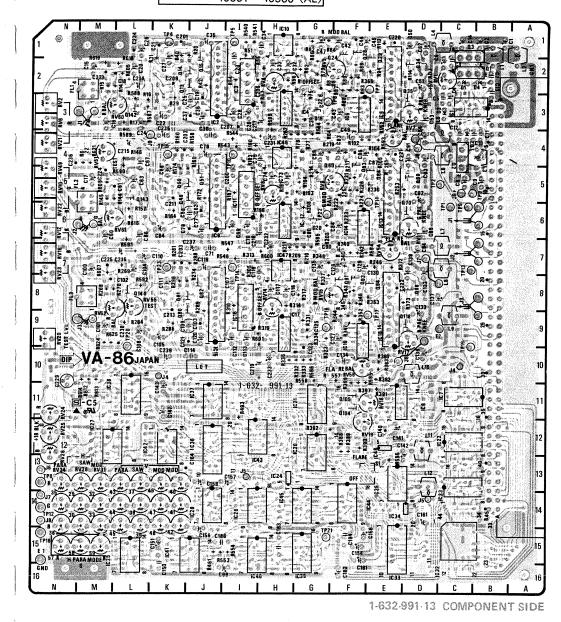
30001 - 30400 (J) 40001 - 40600 (AE)



1-632-991-12 COMPONENT SIDE



Serial No. 10501 – 10800 (UC) 30401 – 30600 (J) 40601 – 40900 (AE)



1-632-991-13 SOLDERING SIDE

CN1 D1 D2 D3 D4 D6 D7 D8 D10 D11 D17 D18 D19 E1 E2 FL1 FL2 FL3 IC1 IC2 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18 IC20 IC21 IC22 IC23 IC24 IC25 IC26 IC27 IC28 IC32 IC33 IC34 IC35 IC38 IC39 IC40 IC40 IC41 IC42 IC43 IC44 IC45 IC46

IC47 IC48

VA-86 1-

VA-86 1

D2 D3 D4 D6 D7

D8 D10 D11

D13 D15

D21

E1 E2

FL1 FL2 FL3 IC1 IC2 IC3 IC4 IC5

IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18 IC19 IC20 IC21 IC22

IC23

IC24 IC25 IC26 IC27 IC28 IC32

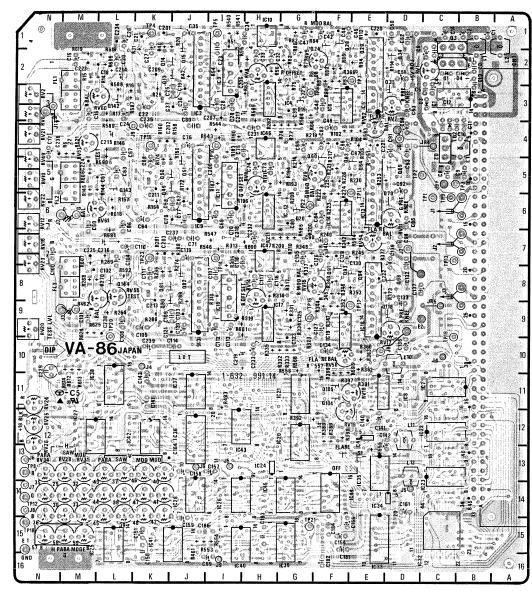
IC32 IC33 IC34 IC35 IC36

IC37 IC38

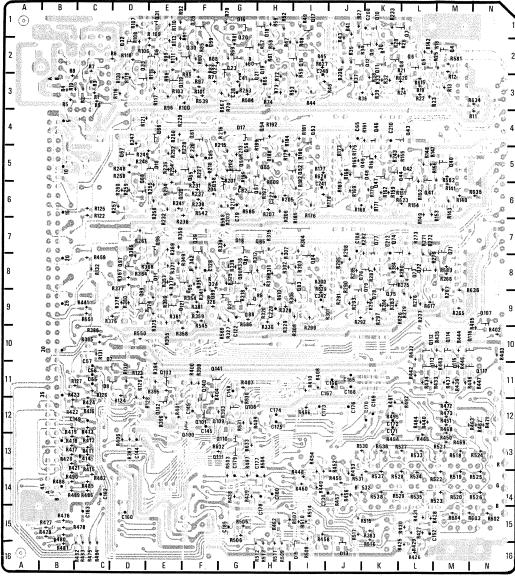
IC41 IC42 IC43 IC44 IC45

VA-86 BOARD

Serial No. 10801 - 11100 (UC) 30601 - 30800 (J) 40901 - 41300 (AE)

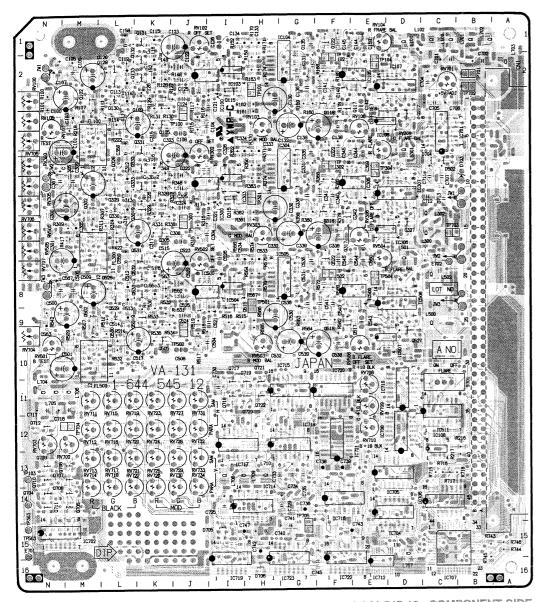


1-632-991-14 COMPONENT SIDE

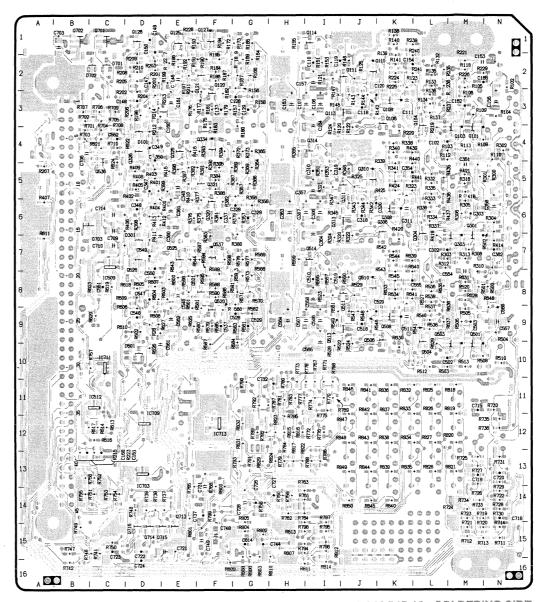


1-632-991-14 SOLDERING SIDE

Serial No. 31301 - (J) 42701 - (AE)



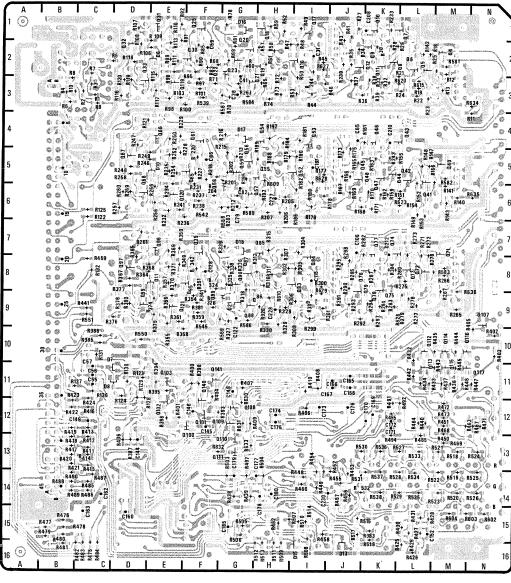
1-644-545-12 COMPONENT SIDE



1-644-545-12 SOLDERING SIDE

VA-131 1 *Solderin CN1 A *D101 E *D301 E *D501 C D502 C *D701 C D703 E D704 C D705 I-D706 F E701 N E702 C FL100 N FL300 L FL500 L IC100 I-IC103 I-IC104 G IC105 E IC500 I-IC504 I-IC505 G 1C506 E IC507 D *1C509 C IC511 C *IC512 C IC701 B IC702 M *IC703 D IC704 D IC705 D 1C706 D *IC709 D IC710 E-*IC711 C-

IC712 E-*IC713 F-



1-632-991-15 SOLDERING SIDE



1-632-991-12 SOLDERING SIDE

VA-86	1-632-99	1-12					
CN1	A-2	Q1	B-2	Q77	K-7	RV22	N-6
D1 D2 D3 D4 D6 D7 D8 D10 D11 D13 D15 D16 D17	C-2 C-4 D-3 B-2 E-2 D-10 C-11 E-5 E-8 J-16 G-1 G-4 G-7	Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q17	C-4 C-1 M-2 L-2 L-1 K-2 K-1 K-2 K-2 K-2 K-2 I-2	Q78 Q79 Q80 Q81 Q82 Q83 Q84 Q85 Q86 Q87 Q88 Q89 Q90 Q91	K-9 K-8 K-8 K-8 J-8 I-7 H-8 H-9 G-8 G-9 F-8 F-8	RV23 RV24 RV25 RV26 RV29 RV30 RV31 RV32 RV33 RV34 RV35 RV36 RV37 RV38	N-7 N-11 N-12 N-12 M-13 N-14 M-13 M-14 N-13 N-14 N-15 L-13
E1 E2	N-15 C-9	Q18 Q19	I – 1 H– 1 H–2 G–2	Q94 Q95 Q96	E-8 F-8 E-7	RV39 RV40 RV41	L-15 K-13 K-14
FL1 FL2 FL3	N-2 N-5 N-8	Q20 Q21 Q22 Q23	G-3 F-2 G-2	Q97 Q98 Q99 Q100	D-8 D-8 D-9 F-12	RV42 RV43 RV44 RV45	K-15 L-13 L-14 L-15
IC1 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18 IC20 IC21 IC22 IC23 IC24 IC25 IC26 IC27 IC28 IC32 IC33 IC34 IC35 IC36 IC37 IC38 IC39 IC44 IC45 IC45 IC47 IC48	C-3 J-2 G-3 G-3 G-3 G-15 G-16 G-16 G-16 G-17 G-18 G-18 G-18 G-18 G-19 G-19 G-11 G-18 G-19 G-19 G-11 G-16 G-16 G-16 G-17 G-18 G-18 G-18 G-18 G-18 G-18 G-18 G-18	Q39 Q40 Q41 Q42 Q43 Q44 Q45 Q46 Q47 Q48 Q50 Q51 Q52 Q53	F-11-12-12-22-75-65-45-55-55-55-56-56-54-45-56-65-67-88-79-8-11-12-12-12-12-12-13-13-13-13-13-13-13-13-13-13-13-13-13-	Q101 Q102 Q103 Q104 Q105 Q107 Q108 Q109 Q110 Q111 Q112 Q113 Q114 Q115 Q116 Q117 Q118 Q120 Q121 Q140 Q141 Q142 Q143 Q144 RV1 RV2 RV3 RV4 RV5 RV7 RV8 RV9 RV10 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV12 RV11 RV11	FEE-11 F-12 F-11 F-11 F-11 F-11 F-11 F-11 F	RV46 RV47 RV48 RV49 RV50 RV51 RV52 RV54 RV55 RV56 RV57 RV58 RV59 S1 TP1 TP2 TP3 TP4 TP5 TP6 TP7 TP8 TP9 TP10 TP11 TP12 TP13 TP16 TP17 TP18 TP16 TP17 TP18 TP19 TP20 TP21 TP22 TP23	N-5 L-6 M-4 E-4 E-7 L-8 F-10 N-15 N-15 M-15 E-13 C-6 D-5 B-5 K-1 I-1 G-3 E-2 N-13



1-632-991-13 SOLDERING SIDE

VA-86	1-632-99	11-13					
CN1	A-2	Q1	B-2	Q77	K-7	RV24	N-11
D1		Q2 03	C-4 C-1	Q78 Q79	K-9 K-8	RV25 RV26	N-12
D2	C-2 C-4	Q4	M-2	Q80	K-9	RV26 RV28	N-13 M-13
D3 D4	D-3 B-2	05	L-2 L-2	Q81 Q82	K-8 J-8	RV29	N-14
D6	E-2	Q6 Q7	L-1	Q83	1-8	RV30 RV31	N-14 M-13
D7 D8	D-11 C-11	Q8 09	L-2 K-2	Q84 Q85	I-7	RV32	
D10	E-5	Q8 Q9 Q10 Q11	K-2 K-1 K-2	Q86 Q87	H-7 H-9 G-8	RV33 RV34	M-14 N-13
D11 D13	F-8 J-16	Q11 Q12	K-2 K-2	Q87	G-8 G-9	RV35	N-14
D15	I-16	Q13	K-2	Q88 Q89	F-9	RV36 RV37	N-15 L-14
D16 D17	G-1 G-4	Q14	K-2 J-2 I-2	വഴവ	G-8 F-8	RV38	L-14
D18	G-4 G-7 G-3	Q15 Q16	I-2	Q91 Q93	F-8	RV39 RV40	L-15 K-14
D19	G-3	Q17 Q18	I-1	Q94 Q95	E-8	RV41	K-14
E1	N-15	Q19 Q20		Q96 Q97	F-8 F-7	RV42 RV43	K-15 L-14
E2	C-9	Q20 Q21	G-1 H-3	Q97 Q98	D-8 D-8	RV44 RV45	L-14
FL1	N-2	Q22 Q23	F-2	Q99	D-9	RV46 RV47	L-15 K-14
FL2 FL3	N-5 N-8	Q23 Q24	G-2 G-1	Q100 Q101	D-9 F-13 F-12	RV47	K-14 K-15
		Q25	G-1 F-1 F-1 E-1 F-2	Q102	E-12	RV48 RV49	N-5
IC1 IC2	C-3 J-3	Q28 Q29	F-1 E-1	Q103 Q104	E-11 F-11	RV50 RV51	M-6 M-4
IC3	I-2	Q30	F-2 E-1	Q105	F-11	RV52 RV54	E-3
IC4 IC5	G-3 E-3	Q31 Q32	E−1 D−2	Q107 Q108	N-9 G-12	RV54 RV55	E-7 K-8
106	F-3	033	D-2 D-2	Q109	G-12 G-13 G-13	RV56 RV57	F-16
IC8	C-11 D-11	Q35	D-2 D-2	Q110 Q111	G-13	RV57 RV58	N-15 N-15
IC9 IC10	J−6 H−1	Q39 Q40	F-7	Q112	L-10	RV58 RV59	M-15
IC10	I-5	Q41 Q42	M-5 L-6	Q113 Q114	L-11 M-10	RV60 RV61	L-3 L-6
IC12 IC13	G-6 E-6	Q42	L-5	Q115 Q116	M-11 M-10	RV62	M-9
IC14	F-6	Q43	L-4 L-5	QIII	N-11	S 1	E-13
IC15 IC16	J-10 I-9	Q45 Q46 Q47	K-5 K-4	Q118 Q119	D-9 E-3	TD1	0.0
IC17	G-9	Q47	K-6	Q120	E-6 E-9	TP1 TP2	C-6 D-5
IC18 IC19	E-9 F-9	Q48 Q49	K-5 K-5 K-5	Q121 Q140	E-9 F-11	TP2 TP3 TP4	B−5 K−1
IC20	G-12	Q50	+	Q141	G-11	TP5	I-1
IC21 IC22	G-11 C-12	Q51 Q52	J-5 I-5 I-4	Q142 Q143	L-3 L-5	TP6 TP7	F-3 E-2
IC23	C-14	Q52 Q53	I-4	Q144	L-5 L-8	TP8	N-13
IC24 IC25	H-13 M-15	Q54 Q55	H-4 H-5	RV1	D-2	TP9 TP10	C-6 I-4
IC26	I-14	Q56	G-5	RV2	N-3	TP11	E-5
IC27 IC28	M-12 J-14	Q57 Q58	H-6 F-6	RV4 RV5	H-2 G-2	TP12 TP13	N-14 C-7
IC32	C-16	Q59 Q60	G-5	RV6	N-3 D-3	TP14	I-7
IC33 IC34	E-16 E-14	Q61	G-4 F-4	RV7 RV8	H-5	TP15 TP16	K−4 G−9
IC35	E-13	Q63 Q64	F-4	RV9 RV10	G-5 N-5	TP17	E-9
IC36 IC37	J-12 J-11	Q65	E-5 F-5	RV10	D-6	TP18 TP19	N-15 C-10
IC38	M-11	Q66 Q67	E-4	RV12 RV14	N-6 H-8	TP20	L-9
IC39 IC40	G-16 H-16	Q68	D-5 D-5	RV15	G-8	TP21 TP22	G-15 G-6
IC41	K-15	Q69	D-5	RV16 RV17	Ñ−7 D−10	TP23	K-7
IC42 IC43	L-12 H-13	Q70 Q71	D-5 M-7	- RV18	E-11		
IC44 IC45	E-14 H-14	Q72 Q73	L-8 L-8	RV19 RV20	E-12 N-9		
IC46	H-4	Q74	K-7	RV21	N-4		
IC47 IC48	H-7 E-12	Q75 Q76	K−9 kr⊱8	RV22 RV23	N-6 N-7		
1040	L-12	. 4210	úo	11720			

IC13

IC14

IC15

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IC17

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IC19

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IC21

IC22

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IC24

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IC26

IC27

IC28

IC32

IC33 IC34

IC35

IC36

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IC39

IC40

IC41

IC42

IC43

IC44

IC45

F-6

I-9 G-9 E-9

F-9

G-12

G-11

C-12

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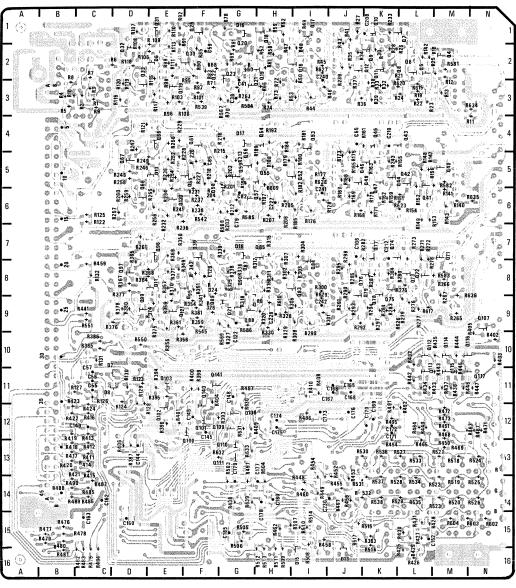
L-12

H-13

E-14

H-14

J-10



1-632-991-14 SOLDERING SIDE

VA-86 1-632-991-14 IC47 CN1 Q74 RV21 IC48 E-12 Q75 K-9 RV22 N-6 Q76 k-8 RV23 D2 C-4 Q77 K-7 RV24 N-11 D3 Q2 C-4 Q78 K-9 RV25 N-12 D-3 C-1 M-2 D4 Q3 Q79 K-8 RV26 B-2 N-13 D6 Q4 Q80 RV28 E-2 K-9 M-13 L-2 L-2 L-1 L-2 Q81 Q82 D7 Q5 K-8 RV29 N-14 D-11 Q6 Q7 D8 C-11 J-8 RV30 N-14 Q83 Q84 Q85 I-8 I-7 D10 E-5 RV31 M-13 Q8 Q9 D11 F-8 RV32 M-14 K-2 K-1 K-2 K-2 D13 J-16 RV33 H-7 M-14 Q10 D15 I-16 Q86 RV34 H-9 N-13 D16 G-1 Q11 Q87 G-8 RV35 N-14 Q12 D17 G-4 Q88 G-9 RV36 N-15 K-2 D18 G-7 Q13 Q89 F-9 RV37 L-14 K-2 D19 G-3 Q14 Q90 G-8 RV38 L-14 J-2 I-2 D20 G-6 Q15 Q91 F-8 RV39 L-15 D21 G-9 Q16 Q93 F-8 RV40 K-14 I-1 Q94 E-8 **RV41** K-14 E1 N-15 Q18 H-1 Q95 F-8 RV42 K-15 E2 C-9 Q19 H-2 Q96 F-7 RV43 L-14 G-1 H-3 Q20 Q97 RV44 D-8 L-14 FL1 Q21 N-2 Q98 D-8 RV45 L-15 Q22 F-2 N-5 Q99 D-9 F-13 FI2 RV46 K-14 Q23 G-2 Q100 FL3 N-8 RV47 K-14 G-1 F-1 Q24 Q101 F-12 RV48 K-15 Q25 IC1 C-3 Q102 E-12 RV49 N-5 F-1 J−3 I−2 028 IC2 Q103 E-11 RV51 M-4 E-1 F-2 E-1 Q29 IC3 Q104 .F-11 RV52 E-3 G-3 E-3 Q30 IC4 Q105 F-11 RV54 E-7 IC5 Q31 Q107 N-9 RV55 K-8 D-2 D-2 IC6 F-3 Q32 Q108 G-12 RV56 F-10 IC7 C-11 Q33 Q109 G-12 RV57 N-15 D-2 IC8 D-11 Q34 Q110 G-13 RV58 N-15 IC9 J-6 Q35 D-2 Q111 G-13 RV59 M-15 IC10 H-1 Q39 F-7 Q112 L-10 RV60 L-3 IC11 I-5 Q40 M-5 Q113 L-11 RV61 L-6 IC12 G-6 Q41 L-6 Q114 M-10 RV62 M-9 E-6 Q42 L-5

M-11

M-10

N-11

D-9

E-3

E-6

E-9 F-11

G-11

L-3

L-5

L-8

D-2

N-3

H-2

G-2

N-3

D-3

H-5

G-5 N-5

D-6

N-6

H-8

G-8

N-7

D-10

E-11

E-12

N-9

S1

TP1

TP2

TP3

TP4

TP5

TP6

TP7

TP9

TP10

TP11

TP12

TP13

TP14

TP15

TP16

TP17

TP18

TP19

TP20

TP21

TP22

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C-6

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B-5

I-1

F-3

E-2

N-13

C-6

I-4

E-5

N-14

C-7

I-7

K-4

G-9

E-9

N-15

C-10

L-9

G-6

G-15

Q115

Q116

Q117

Q118

Q119

Q120

Q121

Q140

Q141

Q142

Q143

Q144

RV1

RV2

RV4

RV5

RV6

RV7

RV8

RV9

RV10

RV11

RV12

RV14

RV15

RV16

RV17

RV18

RV19

RV20

L-4 L-5

K-5

K-4

K-6

K-5 K-5 K-5 J-5

I-5

I-4

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G-5

G-4

F-4

F-4 E-5 F-5

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D-5

D-5

D-5

M-7

L-8

L-8

Q43

Q44

Q45

Q46

Q47

Q48

Q49

Q50

Q51

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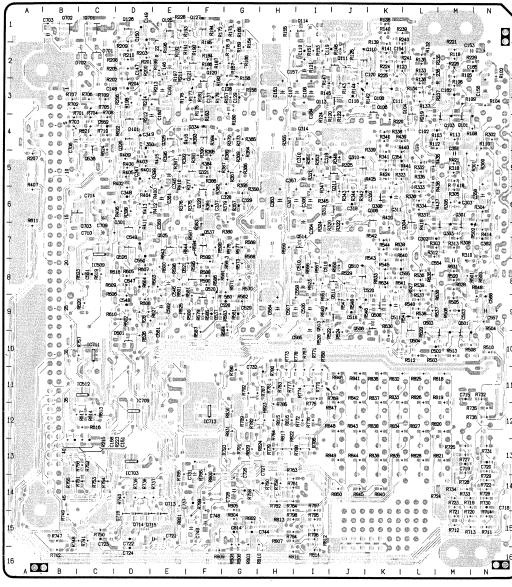
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Q70

Q71

Q72

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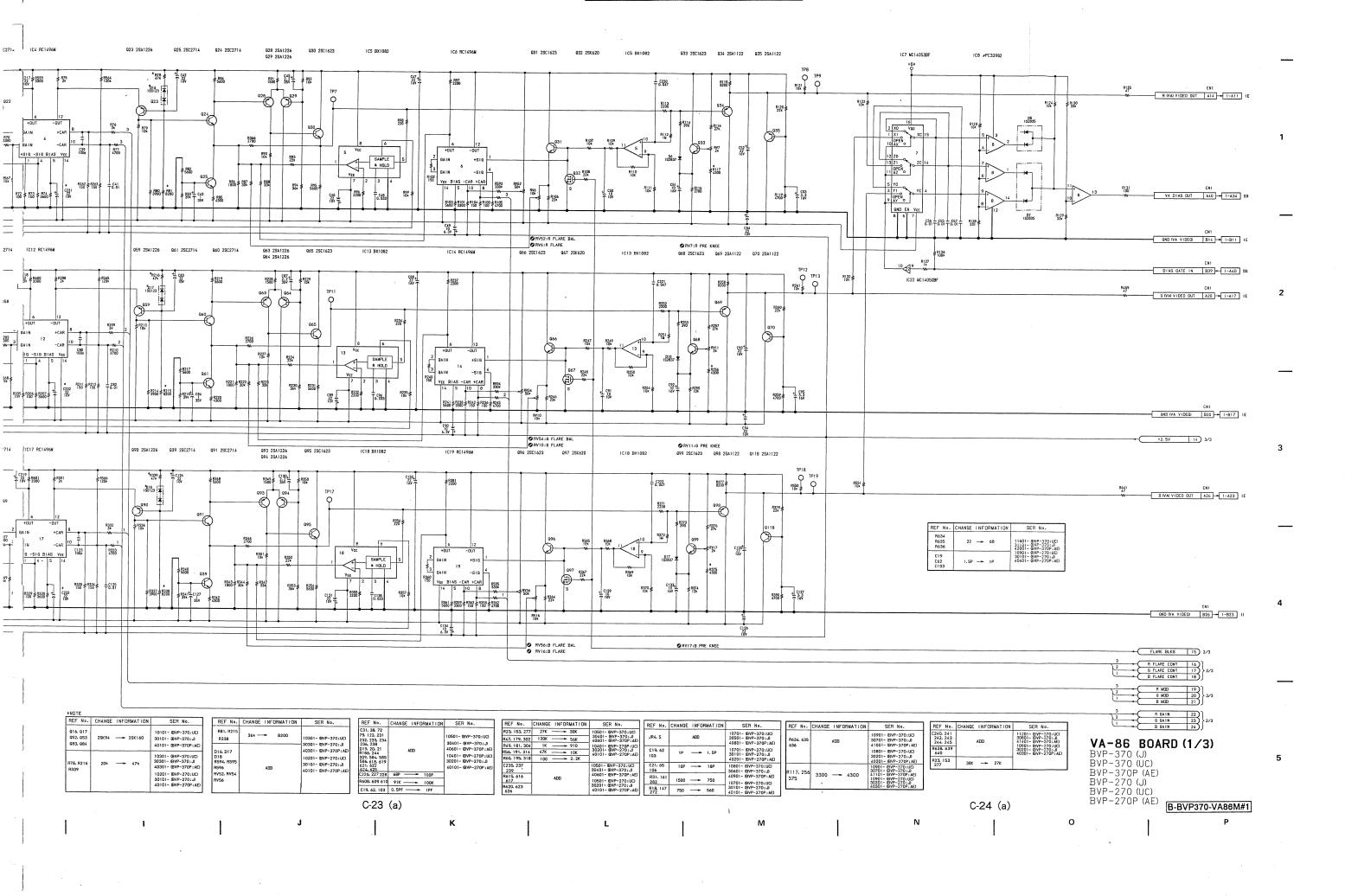


1-544-545-12 SOLDERING SIDE

VA-13	1 1-644-545-12							
*Sold	ering Side							
CN1	A-2	IC714	4 H-13	*Q321	F-5	*Q715 E-15		RV727 J-11
		IC715	G-10	0322	. F-4	*Q716 D-15		RV728 J-12
*D101	D-4	IC716	F-14	*Q325	6 E-4	Q717 I-10		RV729 J-13
*D301	D-6	IC717	′ I-13	*0326	D-4	Q718 I-11		RV730 J-13
*D501	D-10	IC718	G-12	Q327	D-6	Q719 H-10		RV731 J-11
D502	C-5	IC719	I-16	Q328	L-4	Q720 H-11		RV732 J-12
*D701	C-2	IC720	F-10	0329	L-6	Q721 H-10		RV733 J-13
*D702	C-2	IC721	E-13	0330	L-6	Q722 H-11		RV734 J-13
D703	B-5	IC722	F-16	Q331	K-4			
D704	C-4	IC723	G-16	Q332	L-5	RV100 N-2		S701 B-11
D705	I-15			Q333	L-5	RV101 M-4		
D706	H-16	*Q101	M-4	*Q334	F-4	RV102 J-1		TP100 J-3
		0102	M-3	*Q501	M-9	RV103 H-3		TP101 H-3
E701	N-15	*Q103	M-4	Q502	M-9	RV104 E-1		TP102 F-2
E702	C-7	*Q104	L-3	*Q503	L-9	RV105 N-3		TP103 N-13
		Q105	K-4	*0504	L-10	RV106 E-3		TP104 E-2
FL100	M-3	*Q106	K-3	Q505	K-10	RV300 N-4		TP300 J-6
FL300	L-7	*Q108	K-3	*Q506	J-9	RV302 I-4		TP301 H-6
FL500	L-11	Q109	K-3	*Q508	K-9	RV303 H-6	. :	TP302 F-5
		*Q110	K-2	Q509	L-9	RV304 D-4		TP303 N-14
IC100	1-3	*Q111	J-2	*Q510	J-8	RV305 N-5		TP304 E-5
IC103	I-2	*Q113	1-3	*Q511	J-8	RV306 E-6		TP500 J-10
IC104	G-1	*Q114	1-1	*Q513	1-9	RV500 N-6		TP501 H-8
IC105	E-2	Q115	1-3.	*0514	1-7	RV501 N-10		TP502 F-8
IC106		Q117	E-3	Q515	H-9	RV502 J-7		TP503 N-15
IC107	D-2	Q118	F-3	Q517	E-9	RV503 H-10		TP504 E-8
IC108	C-12	*Q120	F-2	Q518	F-9	RV504 E-7		TP701 B-2
IC300	1-6	*Q121	F-2	*Q520	F-8	RV505 N-7		TP702 B-3
IC303	H-6	Q122	F-1	*Q521	E-8	RV506 F-10		TP703 C-6
IC304		*Q125	E-1	Q522	F-7	RV701 C-2		TP704 M-12
IC305		*Q126	D-1	*Q525	E-7	RV702 M-13		TP705 G-14
IC306	D-7	*Q127	F-1	*Q526	D-7	RV703 N-12		
IC307		Q128	L-2	Q527	D-9	RV704 N-10		
IC500	1-8	Q129	L-2	Q528	L-8	RV705 N-4		
IC504		Q130	L-3	Q529	L-8	RV706 N-6		
IC505		Q131	K-1	Q530	L-9	RV707 N-7		
IC506	E-8	Q132	L-1	Q531	K-7	RV708 E-10		
IC507		Q133	L-2	Q532	L-7	RV709 E-11		
IC508	D-8	Q217	D-3	Q533	L-8	RV710 E-12	.5	
	C-8	*Q301	M-6	*Q536	C-5	RV711 M-11		
	C-12	Q302	M-6	*Q537	F-7	RV712 M-12		
*IC512	C-11	*0303	M-7	*Q701	C-1	RV713 M-13		
IC701	B-4	*Q304	L-6	*Q702	B-1	RV714 M-13		
10702	M-15	Q305	K-7	*Q703	C-7	RV715 L-11		
*IC703	D-13	*Q306	K-6	Q704	N-14	RV716 L-12		
IC704		*Q308	K-6	Q705	M-14	RV717 L-13		
IC705		0309	L-6	0706	N-13	RV718 L-13		
IC706		*Q310	J-5	Q707	N-13	RV719 L-11		
10707		*Q311	J-5	0708	N-14	RV720 L-12		
IC708		*Q313	1-6	0709	N-13	RV721 L-13		
*IC709		*Q314	1-4	Q710	N-13	RV722 L-13		
IC710	E-11	Q315	1-6	Q711	N-14	RV723 K-11		
	C-10	Q317	F-7	Q712	N-12	RV724 K-12		
IC712		Q318	F-6	*Q713	E-14	RV725 K-13		
*IC713	r-12	*Q320	F-6	*Q714	D-15	RV726 K-13		

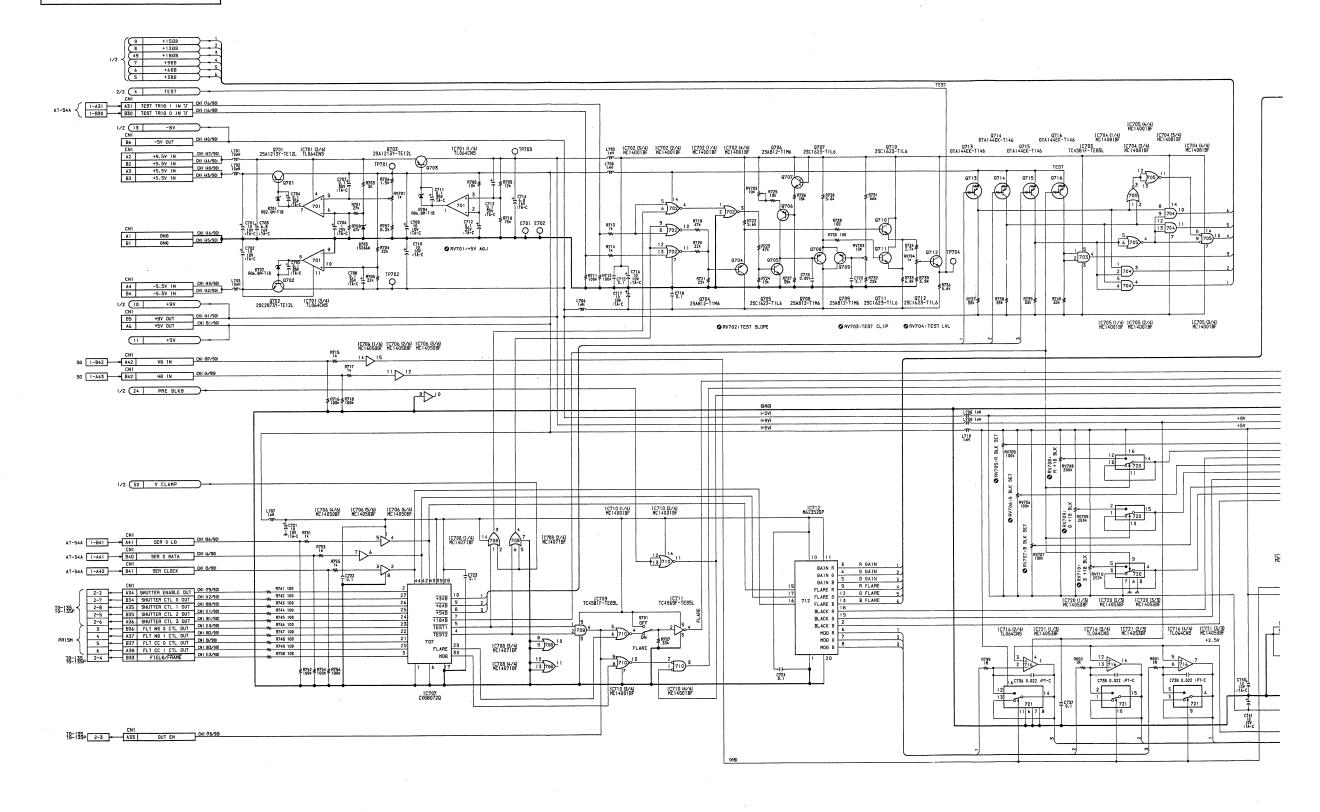
VA-86 (1/3) BOARD Serial No. 10001 - 12010 (UC) IC2 BX1082 Q12 28C2714 Q13 28A1122 Q14 28A1122 Q15 28A1122 IC2 BX1082 *Q16 2SK160 *Q17 2SK160 IC3 BH1217 IC10 TL062CPS Q19 2SK94 Q20 2SK620 Q21 2SC2714 Q18 2SK94 022 2SC2714 IC4 RC1496M 30001 - 31300 (J) 40001 - 42700 (AE) * #31 C209 R29 18p 750 0.01 100k 220± ₽855 R42 ≠ C26 ₹820 \$3300 3/3 1 R SHADE R28 1600 S (T) 09 PA 1-5 + AII R (PA) VIDEO IN PA 1-6 BII GND (PA VIDEO) O RV2:R GAIN ORV51:TEST LEVEL Q42 2SA1226 Q43 2SC2714 Q44 2SK94 TP15 Q46 2SK94 Q47 2SK94 Q40 2SC2714 *Q52 2SK160 *Q53 2SK160 Q56 2SK620 Q57 2SC2714 Q58 2SC2714 IC12 RC1496M C65 R161 C211 R164 R172 ★ C67 ₹8150 3300 ₹97.4 3/3 G SHADE 1300 s (T) 045 PA 1-3 - A17 G (PA) VIDEO IN -PA 1-4 BI7 GND (PA VIDEO) Ø Q49: G GAIN RV61:G BAL Q71 2SC2714 *Q83 2SK160 *Q84 2SK160 Q87 2SK620 Q88 2SC2714 Q89 2SC2714 IC17 RC1496M * C106 R282 C213 R286 180 750 0.01 100k R289 ₹ ↑ 16V R274 ₹3300 3/3 4 B SHADE R384 1300 S (T) R310 5100 PA 1-1 - A23 B (PA) VIDEO IN PA 1-2 B23 GND (PA VIDED) ORV12:B GAIN ORV55:TEST LEVEL 2/3 S TEST 2/3 (12 BLKG (N) 2/3 13 BLKG (P) R78. R216

BVP-370/P BVP-270/P A B C-21 (a) B C B F G H

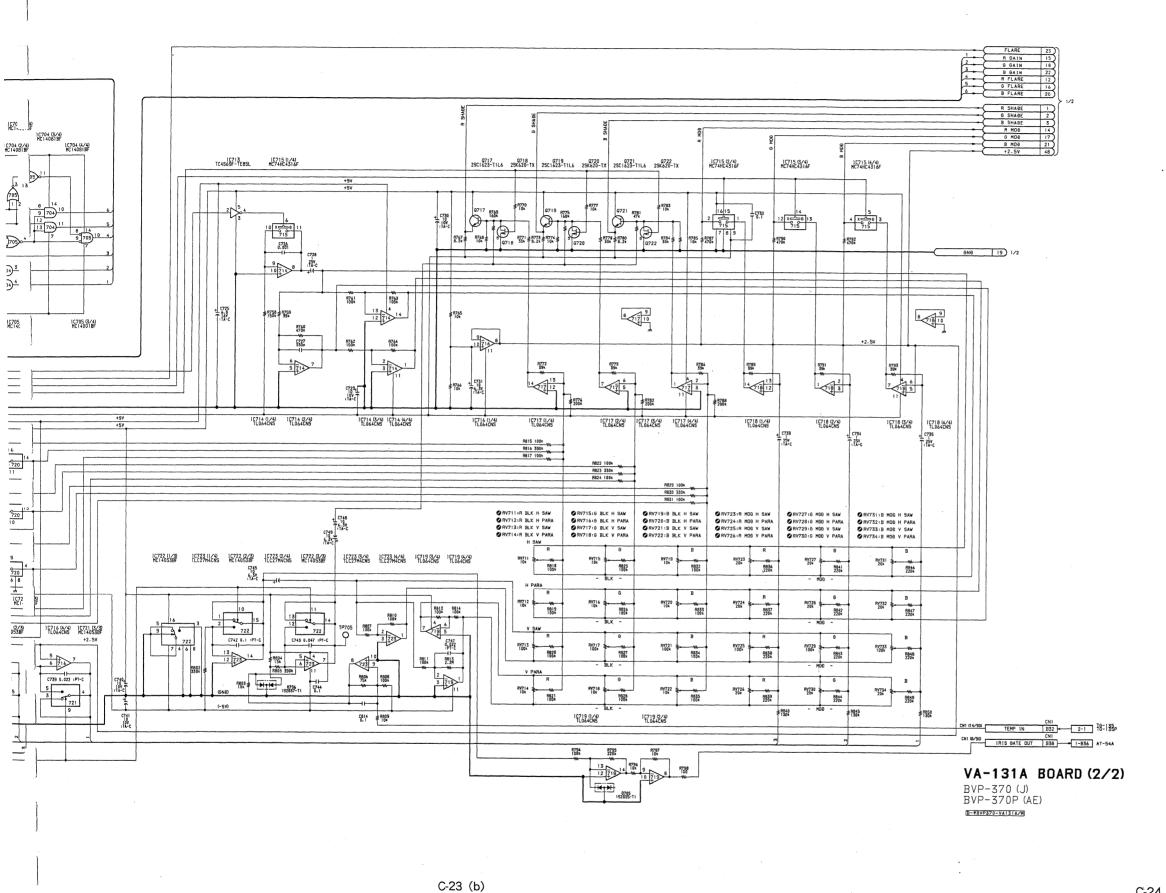


VA-131A BOARD (2/2)

Serial No. 31301 -42701 -(AE)



C-22 (b) C-21 (b) BVP-370/P

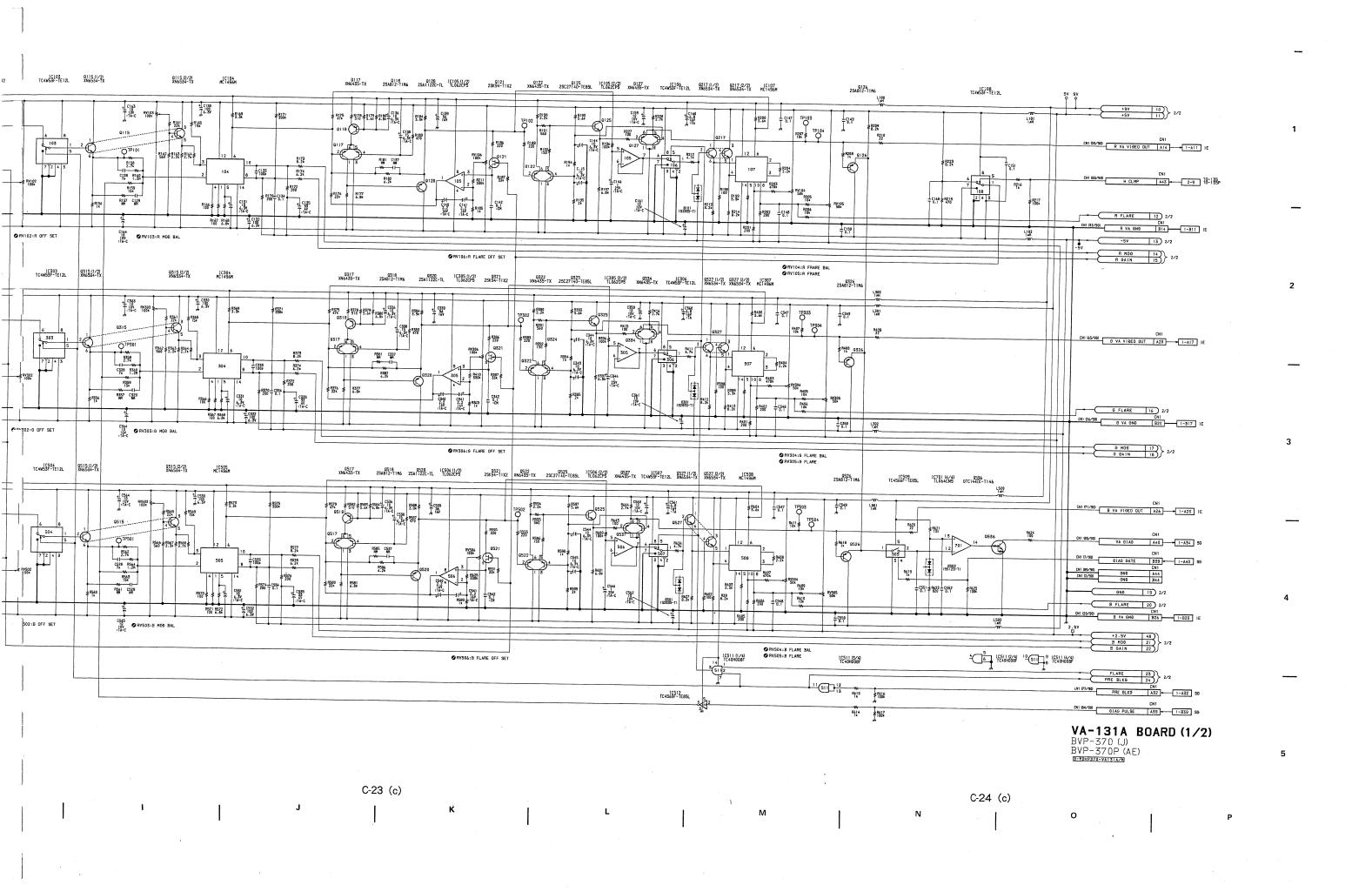


C-24 (b)

VA-131A BOARD (1/2)

Serial No. 31301 - (J) 42701 - (AE)

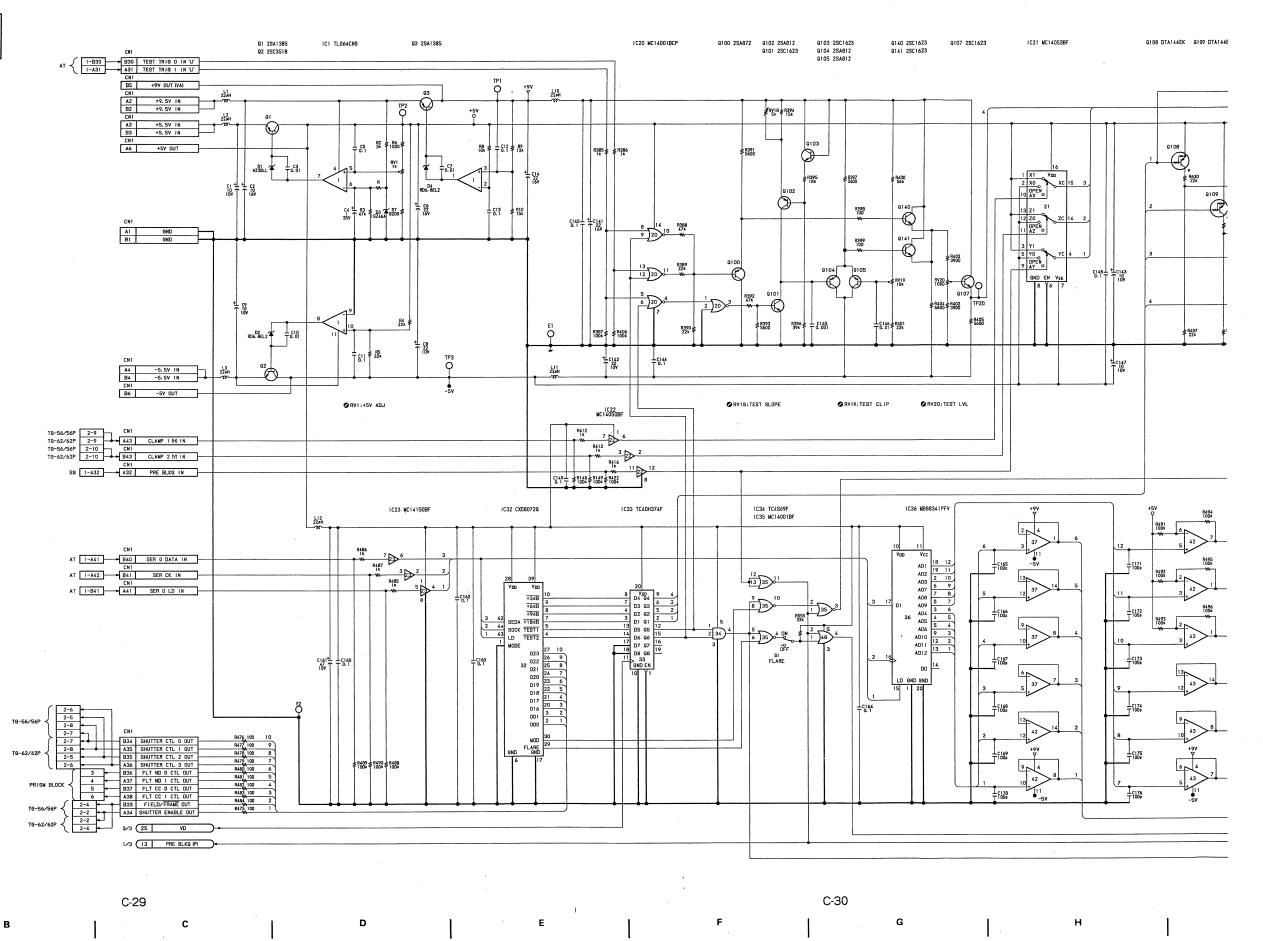
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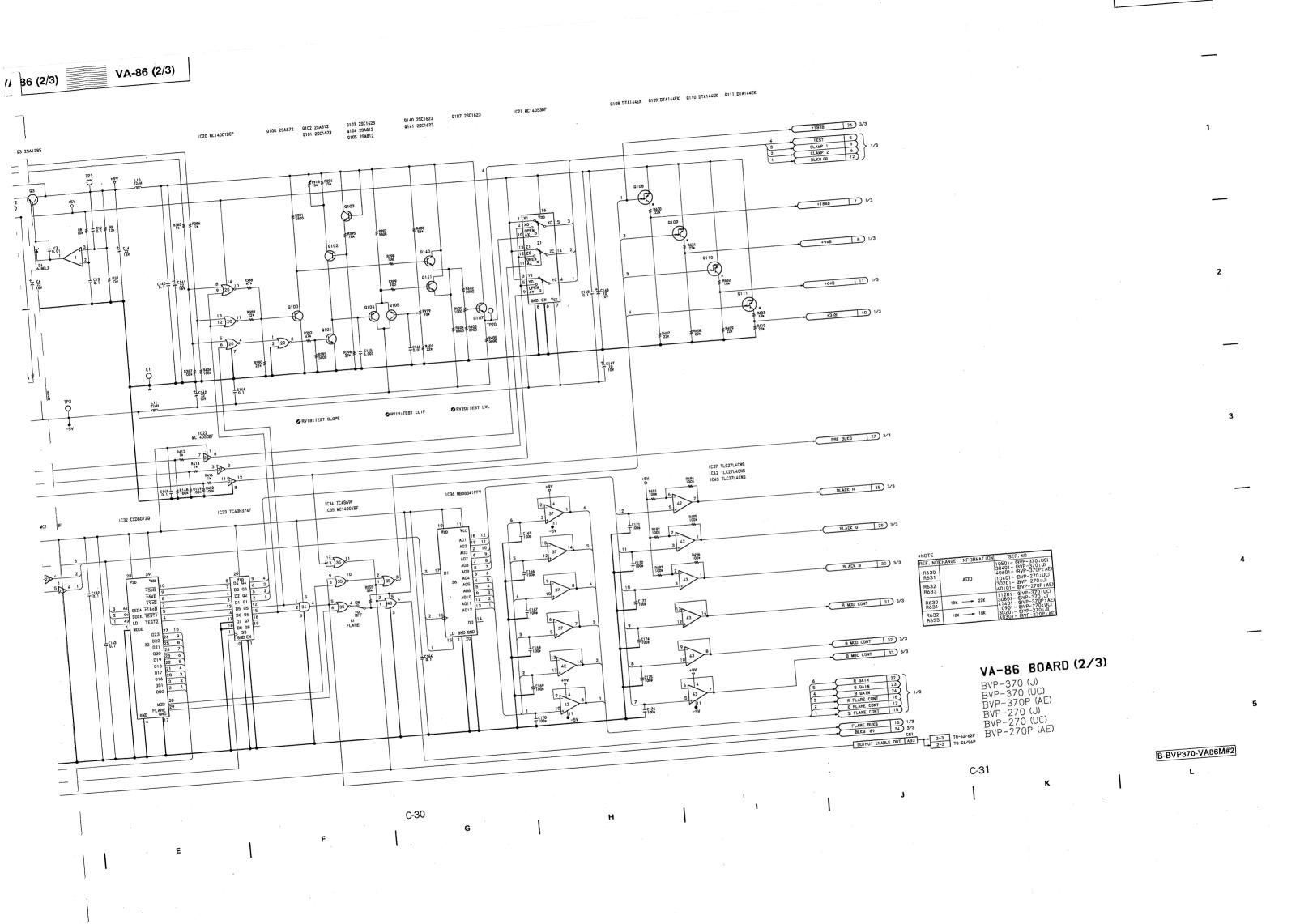


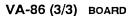
VA-86 (2/3) BOARD

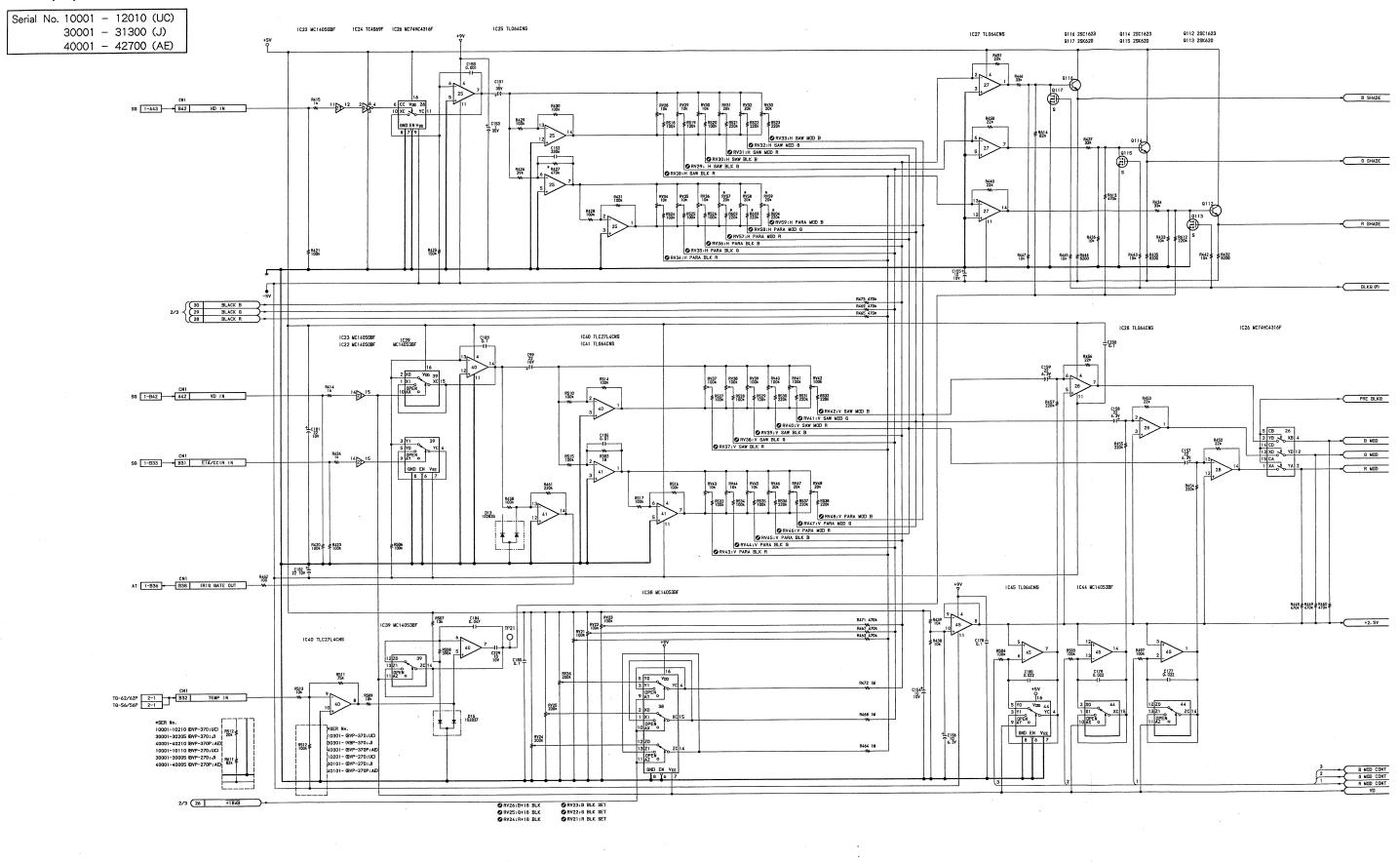
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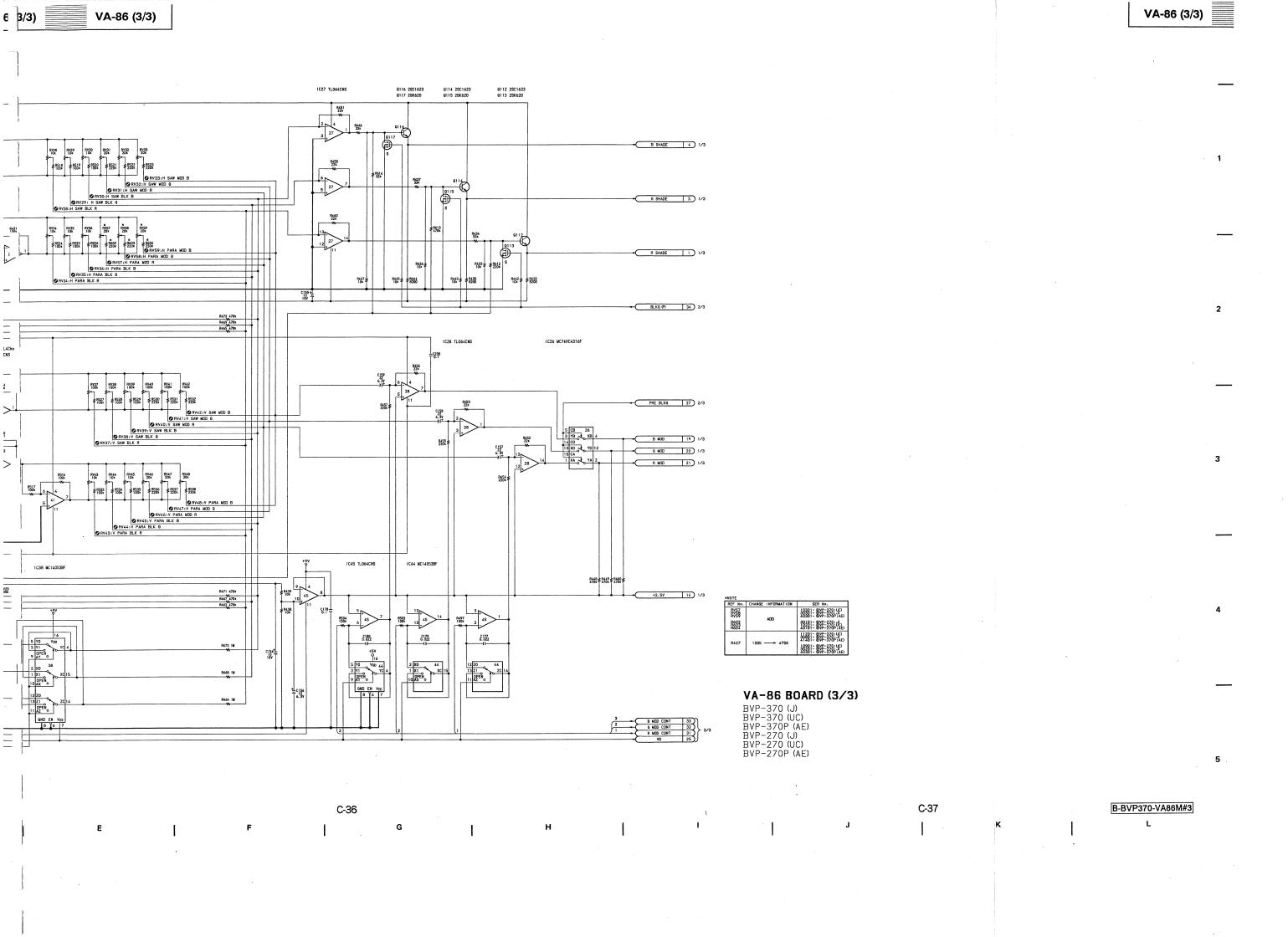
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IE-26/2

CN1 CV1 CV4

DL2 DL3 DL4 DL5 DL6 DL7 DL8 DL10

D1 D2 D3 D4 D5 D6 D7 D8 D9

D13 D14

E1 E2 E3

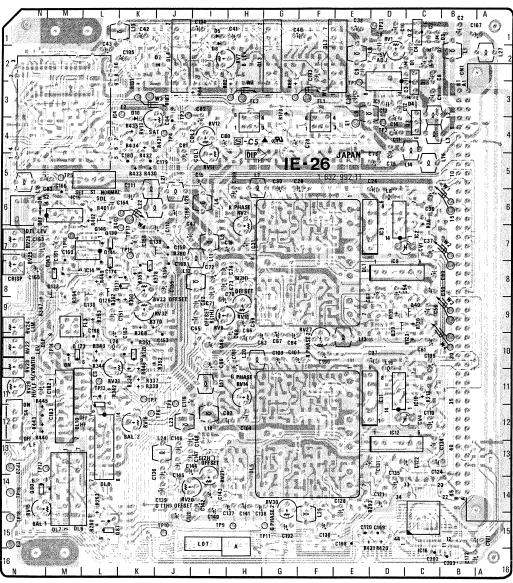
FL1 FL2 FL3

IC2 IC3 IC5 IC6 IC8 IC9 IC10 IC11 IC12 IC13 IC15

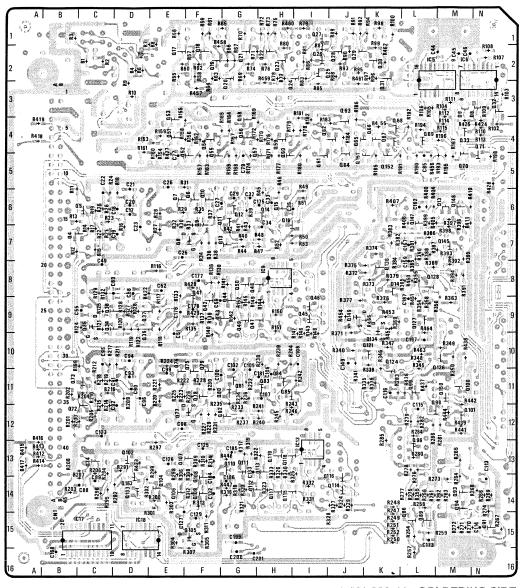
Q15 Q16 Q17

Serial No. 10501 - 10800 (UC) 30401 - 30600 (J)

40601 - 40900 (AE)



1-632-992-11 COMPONENT SIDE



1-632-992-11 SOLDERING SIDE

IE-26/26P

DL1 DL2 DL3 DL4 DL5 DL6 DL7 DL8 DL10

D2 D3 D4 D5 D6 D7 D8 D9 D10 D13 D14

E1 E2 E3

FL1

FL2 FL3

IC1 IC2 IC3 IC5 IC6 IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 L-1

D-8 F-2 H-2 J-2 H-1 M-1 M-1 L-1 M-1

C-2 C-2 C-1 C-3 I-1 I-2 J-2 I-2 M-3 K-3 M-6 K-8

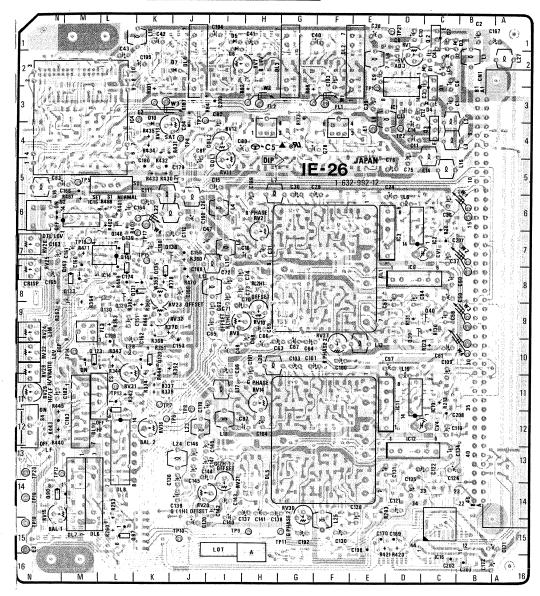
E-4 K-3 N-1

F-3 H-3 L-9

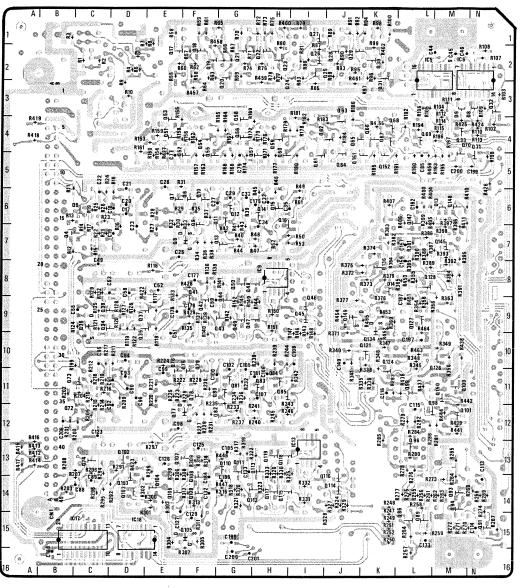
D-3 C-7 D-7 L-2 M-2 D-7 H-8 C-1 D-1 I-1 L-8 M-6 C-1 C-1

B-6 F-6 E-7 F-6 F-6 G-6 F-7 H-6

Serial No. 10801 - 11800 (UC) 30601 - 31200 (J) 40901 - 42100 (AE)

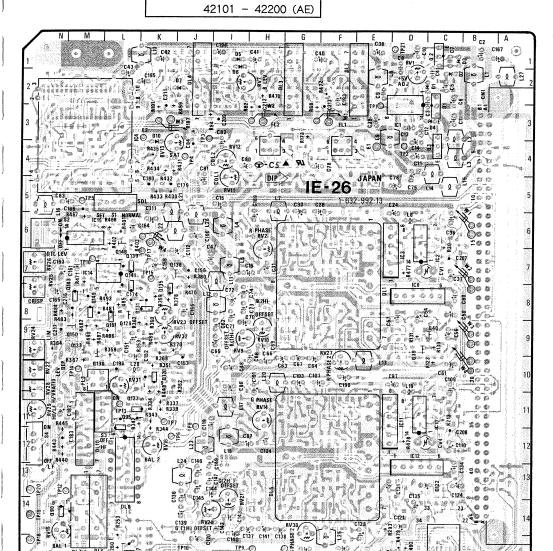


1-632-992-12 COMPONENT SIDE

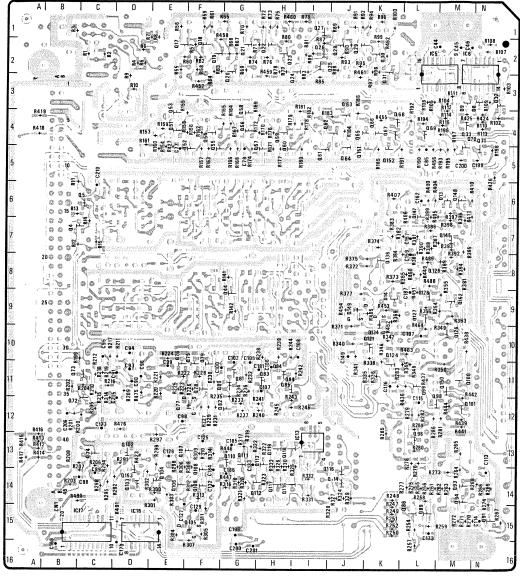


1-632-992-12 SOLDERING SIDE

Serial No. 11801 - 11190 (UC) 31201 - 31300 (J)



1-632-992-13 COMPONENT SIDE



1-632-992-13 SOLDERING SIDE

CP1 D1 D2 D3 D4 D5 D6 D7 D8 D9 E2 E3 IC2 IC3 IC4 IC5 IC6 IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18

IE-26/26P

IE-26/

CN1 CV1 CV4

DL1 DL2 DL3 DL4 DL5 DL6 DL7 DL8

D1 D2 D3 D4

D5 D6 D7 D8 D9 D10 D13 D14

E1 E2 E3 FL1 FL2 FL3

IC1 IC2 IC3 IC5 IC6 IC8 IC9 IC10

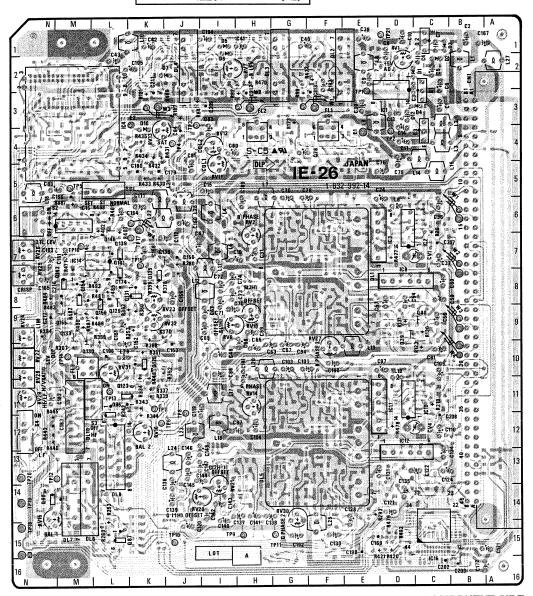
IC16 IC17

IC18

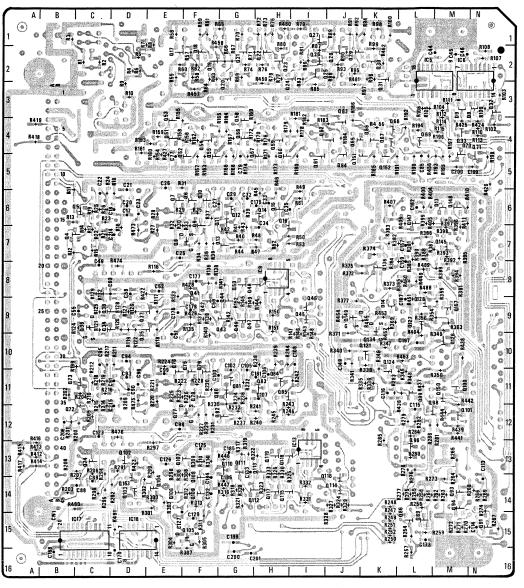
Q1 Q2 Q3 Q4 Q5 Q6

Q7 Q8

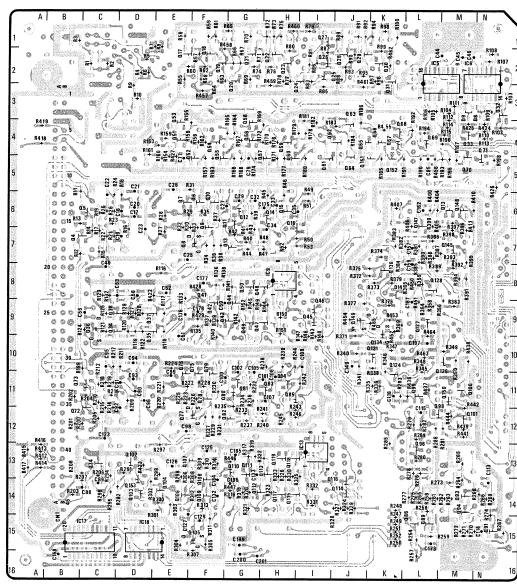
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1-632-992-14 COMPONENT SIDE



1-632-992-14 SOLDERING SIDE



1-632-992-11 SOLDERING SIDE

IE-26/2	26P 1-632-992	2-11			•		
CN1	B-2	Q18	F-2	Q89	L-15	RV22	N-10
CV1 CV4	C-7 C-12	Q19 Q20 Q21	F-2 G-3 G-2	Q90 Q91 Q93	N-14 N-15 M-14	RV23 RV24 RV25	K-8 N-9 N-7
E2 E3	K-3 N-15	Q47 Q48 Q49	G-9 G-8 G-9	Q120 Q121 Q123	K-10 K-10 L-10		
FL1 FL2 FL3	F-3 H-3 L-9	Q50 Q51 Q52	G-8 E-4 E-4	Q124 Q126 Q127	K-10 M-10 L-9		
IC1 IC2 IC3 IC5 IC6 IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18	D-3 C-7 D-7 L-2 M-2 D-7 H-8 C-11 D-11 D-12 I-13 L-8 M-6 C-16 C-15 D-15	Q53 Q54 Q55 Q55 Q57 Q58 Q59 Q60 Q61 Q62 Q63 Q64 Q65 Q66 Q67 Q68 Q69 Q70	E-3 F-4 F-4 G-4 G-4 H-4 I-5 I-4 J-5 J-4 K-4 K-4 K-4	Q128 Q129 Q130 Q131 Q133 Q134 Q135 Q136 Q138 Q141 Q143 Q145 Q146 Q147 Q148 Q149	L-8 L-9 K-8 M-8 K-10 J-8 K-8 J-7 L-7 M-7 L-7 M-6 M-6 J-9		
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q17	C-2 C-1 C-4 B-7 B-6 F-6 E-7 F-6 F-6 G-6 F-7 H-6 H-6 E-2	Q70 Q71 Q72 Q73 Q74 Q75 Q76 Q77 Q78 Q80 Q81 Q82 Q83 Q84 Q85 Q86 Q87	M-5 N-4 B-12 B-11 C-13 F-10 E-10 E-12 E-10 F-11 G-11 F-11 H-11 H-11 L-14 L-5	Q150 Q151 Q152 Q153 RV1 RV2 RV7 RV9 RV10 RV11 RV12 RV13 RV14 RV15 RV16 RV20 RV21	M-11 J-5 K-5 D-4 D-1 H-6 H-2 I-9 I-5 I-4 K-4 H-11 N-14 K-12 J-14 I-14		



1-632-992-12 SOLDERING SIDE

	/26P 1-63:						
CN1	B-2	Q16 Q17	H-6 E-2	Q86 Q87	L-14 L-15	RV20 RV21	J-14 I-14
CP1	L-4	Q18 Q19	F-2 F-2	Q89 Q90	L-15 N-14	RV22 RV23	N-10 K-8
CV1 CV4	C-7 C-12	Q20 Q21 Q22	G-3 G-2 H-2	Q91 Q93 Q94	N-15 M-14 M-14	RV24 RV25	N-9 N-7
DL1 DL2	D-8 F-2	Q23 Q24	H-2 H-3	Q95 Q96	L-11 L-12	RV26 RV27 RV28	N-7 F-9 N-10
DL3 DL4	H-2 J-2	Q25 Q26	I-2 I-2	Q98 Q99	L-11 L-11	RV29 RV30	N-11 G-14
DL5 DL6	H-13 M-15	Q27 Q28	I-1 J-2	Q100 Q101	M-11 M-12	RV31 RV32	L-11 K-9
DL7 DL8 DL10	M-15 L-14 M-12	Q29 Q30 Q31	J−2 K−2 K−3	Q102 Q103	D-13 D-14 E-14	S1	L-6
D1	C-2	Q32 Q33	N-3 M-4	Q104 Q105 Q106	F-15 E-14	S2 S3 S4	M-6 L-11 N-12
D2 D3	C-2 C-1	Q34 Q35	C-9 D-10	Q107 Q108	E-13 F-13	TP1	E-3
D4 D5 D6	C-3 I-1 I-2	Q36 Q37 Q38	C-9 D-9 C-9	Q109 Q110	F-14 G-13	TP2 TP3	D-4 J-3
D7 D8	J-2 I-2	Q39 Q40	D-9 C-9	Q111 Q112 Q113	G-13 G-14 H-13	TP4 TP5 TP6	J−4 M−5 J−12
D9 D10	M-3 K-3	Q41 Q42	F-8 F-9	Q114 Q115	J-14 H-14	TP7 TP8	K-11 J-11
D13 D14	M-6 K-8	Q43 Q44	F-9 G-9	Q116 Q117	J-14 H-14	TP9 TP10	I-15 J-15
E1 E2	E-4 K-3	Q45 Q46 Q47	I-9 I-9 G-9	Q118 Q119 Q120	H-13 H-13 K-10	TP11 TP12 TP13	G-15 N-13 L-11
E3	N-15	Q48 Q49	G-8 G-9	Q121 Q123	K-10 L-10	TP14 TP15	M-10 K-7
FL1 FL2 FL3	F-3 H-3 L-9	Q50 Q51 Q52	G-8 E-4	Q124 Q126	K-10 M-10	TP16 TP17	M-7 K-7
IC1	D-3	Q53 Q54	E-4 E-3 F-4	Q127 Q128 Q129	L-9 L-8 L-9	TP18 TP19 TP20	N-15 N-14 N-13
IC2 IC3	C-7 D-7	Q55 Q56	F-4 G-4	Q130 Q131	L-9 K-8	TP21	D-1
IC5 IC6	L-2 M-2	Q57 Q58	G-4 G-4	Q133 Q134	M-8 K-10		
IC8 IC9 IC10	D-7 H-8 C-11	Q59 Q60 Q61	H-4 H-4 I-5	Q135 Q136 Q138	J-8 K-8 J-7		
IC11 IC12	D-11 D-12	Q62 Q63	I-4 J-3	Q139 Q141	L-7 L-7		
IC13 IC14	I-13 L-8	Q64 Q65	J-5 J-4	Q143 Q145	M-8 M-7		
IC15 IC16	M-6 C-16	Q66 Q67	K-4 K-4	Q146 Q147	L-7 L-6		
IC17 IC18	C-15 D-15	Q68 Q69 Q70	K-4 L-4 M-5	Q148 Q149 Q150	M-6 J-9 M-11		
Q1 Q2	C-2 C-1	Q71 Q72	N-4 B-12	Q151 Q152	J-5 K-5		
Q3 Q4	C-4 B-7	Q73 Q74	B-11 C-13	Q153	D-4		
Q5 Q6 Q7	B-6 F-6 E-6	Q75 Q76	F-10 E-10	RV1 RV2	D-1 H-6		
Ø8 Ø8	E-7 F-6	Q77 Q78 Q79	E-12 E-10 F-10	RV7 RV9 RV10	H-2 I-9 H-9		
Q10 Q1.1	F-6 F-6	Q80 Q81	F-11 G-11	RV11 RV12	I-5 I-4		
Q12 Q13	G-6 F-7	Q82 Q83	F-12 H-11	RV13 RV14	K-4 H-11		
Q14 Q15	H-6 H-6	Q84 Q85	H-11 H-11	RV15 RV16	N-14 K-12		

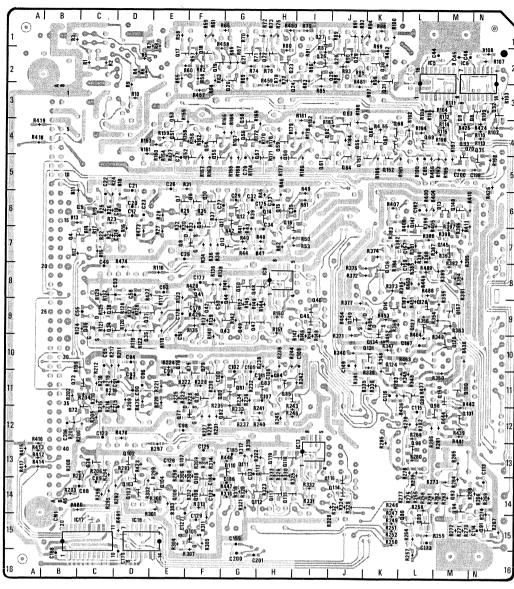
IE-26/26P



1-632-992-13 SOLDERING SIDE

IE-26/	′26P 1-63	2-992-13					
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CP1	L-4	Q17	H-6 E-2 F-2	Q86 Q87	L-14 L-15 L-15	RV13 RV14	K-4 H-1
CV1 CV4	C-7 C-12	Q18 Q19 Q20 Q21	F-2 F-2 G-3 G-2	Q89 Q90 Q91 Q93	N-14 N-15 M-14	RV15 RV16 RV20 RV21	N-1 K-1 J-1 I-1
DL1 DL2 DL3 DL4 DL5 DL6 DL7 DL8 DL10	E-8 F-2 H-2 J-2 H-13 M-15 M-15 L-14	Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31	H-2 H-2 H-3 I-2 I-1 J-2 J-2 J-2 K-2 K-3	Q94 Q95 Q96 Q98 Q99 Q100 Q101 Q102 Q103 Q104	M-14 L-11 L-12 L-11 L-11 M-11 M-12 D-13 D-14 E-14	RV22 RV23 RV24 RV25 RV26 RV27 RV28 RV29 RV30 RV31	N-1 K-8 N-9 N-7 N-7 F-9 N-1 N-1 G-1 L-1
D1 D2 D3 D4 D5	C-2 C-2 C-1 C-3 I-1 I-2	Q32 Q33 Q34 Q35 Q36 Q37	N-3 M-4 C-9 D-10 C-9 D-9	Q105 Q106 Q107 Q108 Q109 Q110	F-15 E-14 E-13 F-14 F-14 G-13	RV32 S1 S2 S3 S4	K-9 L-6 M-6 L-1 N-1
D7 D8 D9 D10 D13 D14	J-2 M-3 M-3 K-3 M-6 K-9	Q38 Q39 Q40 Q41 Q42 Q43 Q44	C-9 D-9 C-9 F-8 F-9 G-9 G-9	Q111 Q112 Q113 Q114 Q115 Q116 Q117	G-13 G-14 H-13 J-14 H-14 J-14 H-14	TP 1 TP2 TP3 TP4 TP5 TP6	E-3 D-4 J-3 J-4 M-5 J-1
E1 E2 E3	E-4 K-3 N-15	Q45 Q46 Q47	I-9 I-9 G-9	Q118 Q119 Q120	H-13 H-13 K-10	TP7 TP8 TP9	K-1 J-1 I-1 J-1
FL1 FL2 FL3	F-3 H-3 M-10	Q48 Q49 Q50 Q51	G-8 G-9 G-8 E-4	Q121 Q123 Q124 Q126	K-10 L-11 K-10 M-10	TP10 TP11 TP12 TP13	G-1 N-1 L-1
IC1 IC2 IC3 IC4 IC5 IC6 IC8 IC9 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18	D-3 C-7 D-7 L3 L-2 M-2 D-8 H-8 C-11 D-11 D-12 I-13 M-7 M-6 C-16 C-15 D-15	Q52 Q53 Q54 Q55 Q56 Q57 Q58 Q69 Q61 Q62 Q63 Q64 Q65 Q66 Q67 Q68 Q69 Q70	E-4 E-3 F-4 F-4 G-4 G-4 H-4 I-5 I-4 J-3 J-5 J-4 K-4 K-4 K-4	Q127 Q128 Q129 Q130 Q131 Q133 Q134 Q135 Q136 Q138 Q139 Q141 Q143 Q145 Q147 Q146 Q147 Q148 Q149 Q150	L-9 L-9 M-10 K-8 M-9 K-10 K-8 J-7 L-7 L-7 L-7 L-7 M-8 M-7 L-7 L-6 M-6 J-9 M-11	TP14 TP15 TP16 TP17 TP18 TP19 TP20 TP21	M-11 K-7 M-7 K-7 N-1 N-1 D-1
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8	C-2 C-1 C-4 B-7 B-6 F-6 E-6 E-7	Q71 Q72 Q73 Q74 Q75 Q76 Q77 Q78	N-4 B-12 B-11 C-13 F-10 E-10 E12 F-11	Q151 Q152 Q153 Q154 Q155 Q156 Q157	J-5 K-5 D-14 D-14 D-14 D-14 D-14		
Q9 Q10 Q11 Q12 Q13 Q14	F-6 F-6 F-6 G-6 F-7 H-6	Q79 Q80 Q81 Q82 Q83 Q84	F-11 F-10 F-11 G-11 F-12 H-11 H-11	RV1 RV2 RV7 RV9 RV10	D-1 H-6 H-2 I-9 H-9 I-5		

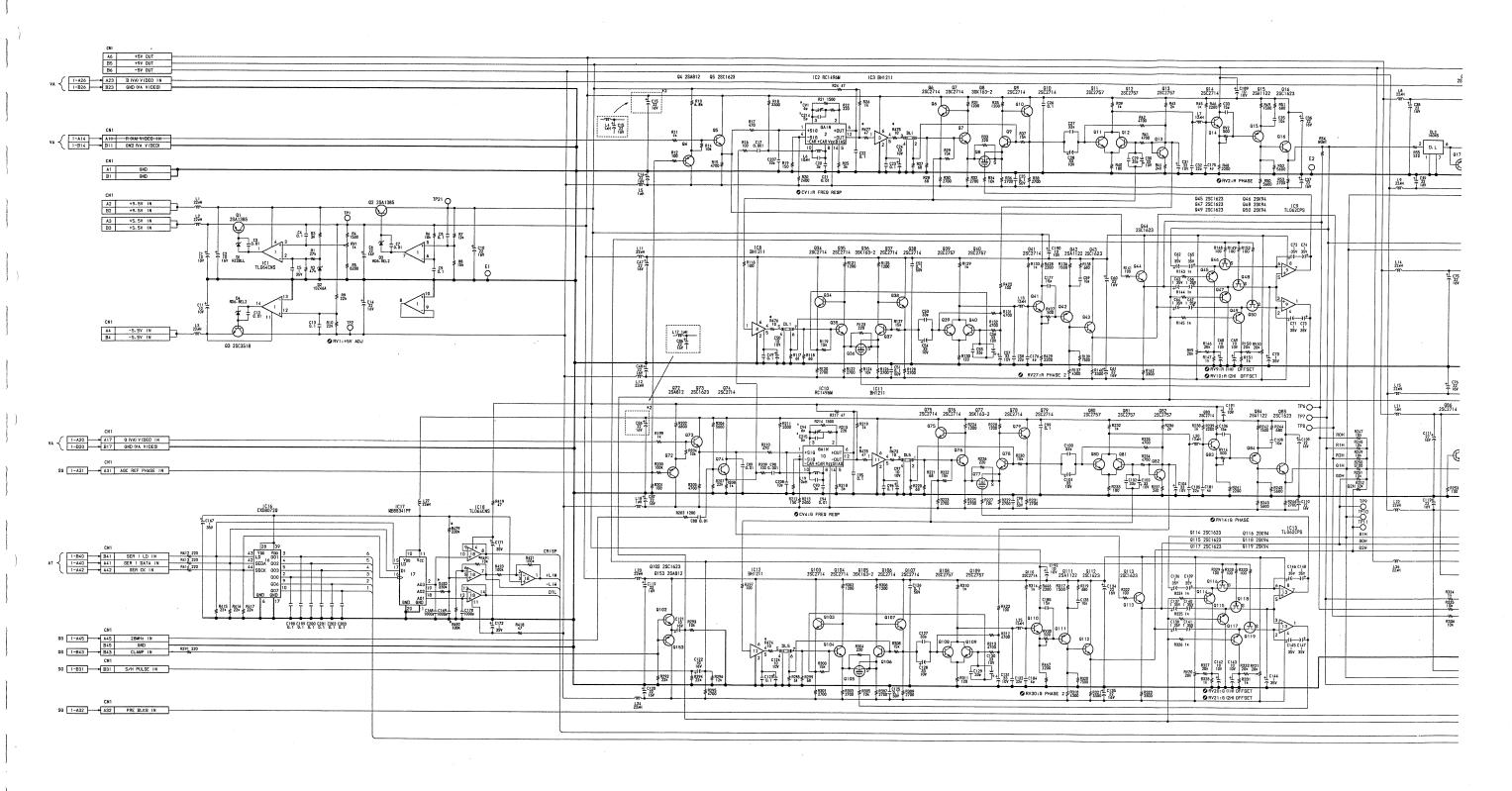
IE-26/26P 1-632-992-14



1-632-992-14 SOLDERING SIDE

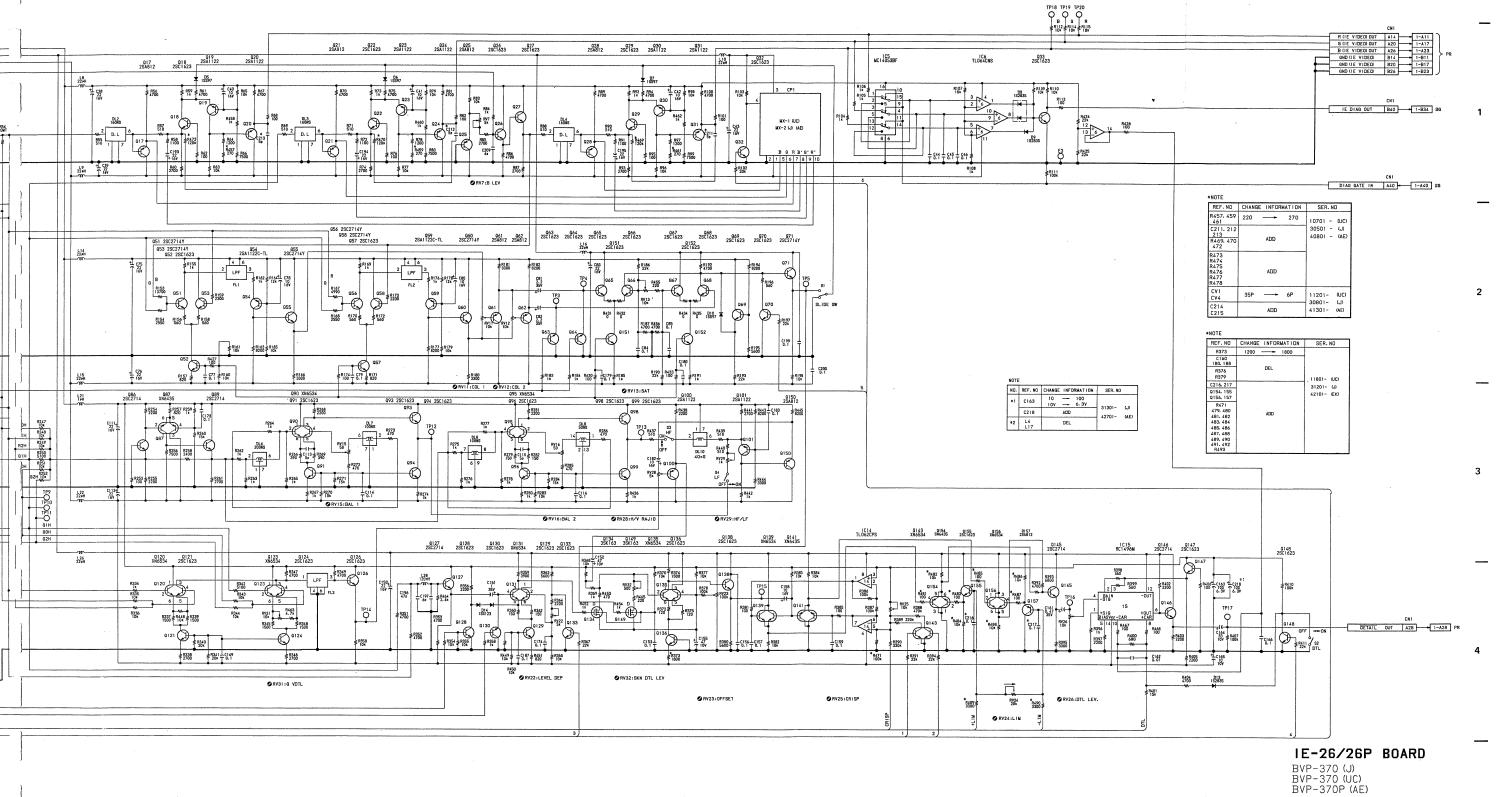
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CV1 CV4	C-7 C-12	Q19 Q20 Q21	F-2 G-3 G-2	Q89 Q90 Q91	L-15 N-14 N-15	RV14 RV15 RV16	H-11 N-14 K-12
DL1 DL2 DL3 DL4 DL5 DL6 DL7	D-8 F-2 H-2 J-2 H-13 M-15	Q22 Q23 Q24 Q25 Q26 Q27 Q28	H-2 H-3 I-2 I-1 J-2	Q93 Q94 Q95 Q96 Q98 Q99	M-14 M-14 L-11 L-13 M-11 L-11	RV20 RV21 RV22 RV23 RV24 RV25 RV26	J-14 I-14 N-10 K-8 N-9 N-7
DL8 DL10	L-14 M-12	Q29 Q30 Q31	J-2 K-2 K-3	Q101 Q102 Q103	M-12 D-13 D-14	RV27 RV28 RV29	F-9 N-10 N-11
D1 D2 D3 D4	C-2 C-2 C-1 C-3	Q32 Q33 Q34 Q35	N-3 M-4 C-9 D-10	Q104 Q105 Q106 Q107	E-14 F-15 E-14 E-13	RV30 RV31 RV32	G-14 L-11 J-9
D5 D6 D7 D8	I-1 I-2 J-2 M-3 M-3	Q36 Q37 Q38 Q39 Q40	C-9 D-9 C-9 D-9 C-9	Q108 Q109 Q110 Q111 Q112	F-13 F-14 G-13 G-13 G-14	\$1 \$2 \$3 \$4	L-6 M-6 L-12 N-12
D10 D13 D14	K-3 M-6 K-9	Q41 Q42 Q43 Q44	F-8 F-9 F-9 G-9	Q113 Q114 Q115	H-13 J-14 H-14	TP1 TP2 TP3	E-3 D-4 J-3
E1 E2 E3	E-4 K-3 N-15	Q45 Q46 Q47	I-9 I-9 G-9	Q116 Q117 Q118 Q119	J-14 H-14 H-13 H-13	TP4 TP5 TP6 TP7	J-4 M-5 J-12 K-11
FL1 FL2 FL3	F-3 H-3 M-10	Q48 Q49 Q50 Q51	G-8 G-9 G-8 E-4	Q120 Q121 Q123 Q124	K-10 K-10 L-11 K-10	TP8 TP9 TP10 TP11	J-11 I-15 J-15 G-15
IC1 IC2 IC3 IC5 IC6 IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18	D-3 C-7 D-7 L-2 M-2 D-7 H-8 C-11 D-12 L-13 L-8 M-6 C-16 C-15 D-15	Q52 Q53 Q54 Q55 Q56 Q57 Q58 Q59 Q60 Q61 Q62 Q63 Q64 Q65 Q66 Q67 Q68	E-4 E-3 F-4 F-4 G-4 H-4 I-5 I-4 J-5 K-4 K-4 K-4	Q126 Q127 Q128 Q129 Q130 Q131 Q133 Q134 Q135 Q138 Q139 Q141 Q143 Q145 Q147 Q148	M-10 L-9 L-8 M-10 K-8 M-9 K-10 K-8 K-7 L-7 M-8 M-7 L-7	TP12 TP13 TP14 TP15 TP16 TP17 TP18 TP19 TP20 TP21	N-13 L-11 M-10 K-7 M-7 K-7 N-15 N-14 N-13 D-1
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8	C-2 C-1 C-4 B-7 C-6 F-6 E-7 F-6	070 071 072 073 074 075 076 077	M-4 N-4 B-12 B-11 C-13 F-10 E-10 E-12 F-11	Q148 Q149 Q150 Q151 Q152 Q153 Q154 Q155 Q156 Q157	M-6 J-9 M-11 J-5 K-5 D-14 M-8 M-9 L-9 N-8		
Q10 Q11 Q12 Q13 Q14 Q15 Q16	F-6 F-6 G-6 F-7 H-6 H-6	Q79 Q80 Q81 Q82 Q83 Q84 Q85	F-10 F-11 G-11 F-12 H-11 H-11	RV1 RV2 RV7 RV9 RV10 RV11	D-1 H-6 H-2 I-9 H-9 I-5		

IE-26/26P BOARD



BVP-370/P C-41

A | B | C | D | E | F | G | H |

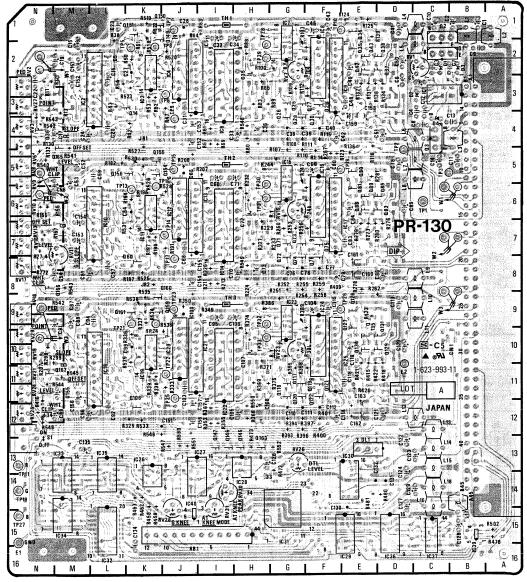


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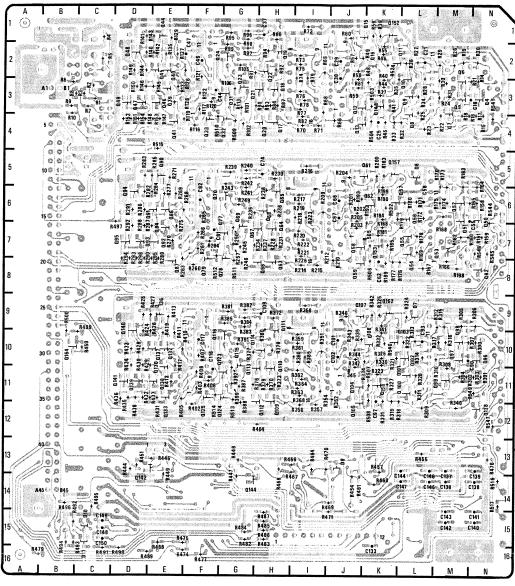


PR-130 BOARD

Serial No. 10001 - 10210 (UC) 30001 - 30205 (J) 40001 - 40210 (AE)



1-632-993-11 COMPONENT SIDE



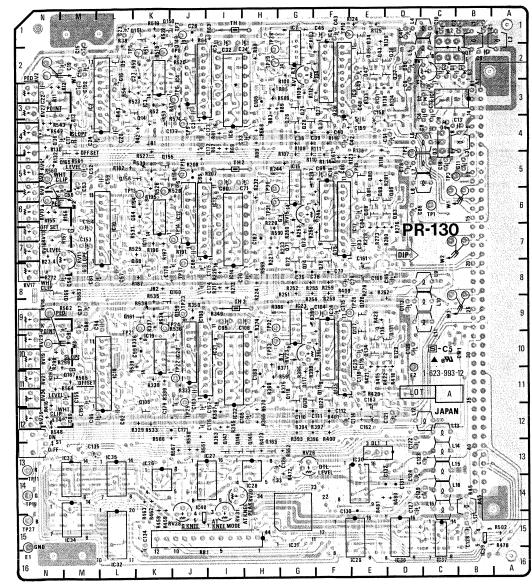
1-632-993-11 SOLDERING SIDE

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DL1	E-13	Q15 Q16	J-1 K-2	Q85 Q86	D-6 E-6	Q155 Q156	K-5 L-5 K-3	TP26 TP27	E-9 N-15
D1 D2	C-2	Q17 Q18	H-4 H-3	Q87	E-8	0158	K-11	TP28 TP29	H-1 H-2
D3	C-3 B-2	Ω19	H-2	Q88 Q89	E-6 E-6	Q160	Ĵ−9 J−8	TP30 TP31	H-5 H-6
D4 D5	C-4 L-2	Q20 Q21	H-4 G-3	Q90 Q91	E-5 D-6	Q161 Q162	L-9 K-9 H-13	TP32 TP33	H-9 H-10
D6 D7	L-5	Q22 Q23	H-2 G-3	Q92	E-7	Q163		11.00	H-10
D8	L-9 J-13	Q24	F-2	Q93 Q94	D-7 D-6	Q164 Q165	B−10 M−5		
D10 D11	C-15 C-16	Q25 Q26	G-3 G-4	Q95 Q96	D-7 N-10	Q166 Q167	M-6 M-11		
E1	N-16	Q27 Q28	F-3 G-4	Q97 Q98	M-10 M-9	RB1	J-16		
E2	D-11	Q29 Q30	F-3 F-4	Q9 9	M-11				
IC1 IC2	C-3 M-3	Q31	G-3	Q101	L-11 L-11	RV1 RV2	C-2 N-2		
IC3	K-3	Q32 Q33	G-4 F-4	Q102 Q103	L-10 L-10	RV3 RV5	N-4 N-5		
IC4 IC5	J−2 I−2	Q34 Q35	E-1 E-2	Q104 Q105	J−11 J−12	RV7 RV8	G-2 N-5		
IC6 IC7	I-4 G-1	Q36 Q37	N-4			RV9	N-6		
IC8 IC9	F-1 E-3	Q38	D-2 D-2	Q107 Q108	J-9 K-10	RV10 RV11	N−6 M−7		
IC10	L-7	Q39 Q40	E-3 E-2	Q109 Q110	H-12 H-11	RV13 RV15	N-7 G-6		
IC11 IC12	K−7 J−6	Q41 Q42	E-4 E-2	Q111	K-11 J-9 K-10 H-12 H-11 H-9 H-12 G-11 G-10 G-10 G-11	RV16	N-7		
IC13 IC14	I-6 I-8	Q43	E-2	Q113	G-11	RV17 RV18	N-8 N-9		
IC15 IC16	G-5 F-5	Q44 Q45	E-1 E-2	Q114 Q115	G-10 G-10	RV19 RV21	N-10 N-11		
IC17	E-7	Q46 Q47	E-3 D-3	Q116 Q117	F-10 G-11	RV23 RV24	G-10 N-11		
IC18 IC19	L-11 K-11	Q48 Q49	D-2 D-3	Q118	G-11 F-11	RV25	N-12		
IC20 IC21	J−10 I−10	Q50	N-6	Q120	G-11	RV26 RV27	G-13 N-3		
IC22	I-12	Q51 Q52	M-7 M-6	Q121 Q122	F-11 G-11 F-11 F-10	RV28 RV29	J−15 N−10		
IC23 IC24	G-9 F-9	ฉ53 Q54	M-7 L-8	Q123 Q124	F-10 G-12	RV30 RV31	H-14 I-15		
IC25 IC26	E-10 K-13	Q55 Q56	L-7 L-6	Q125	F-12 E-9 E-9 N-12 D-10	S1	N-12		
IC27 IC28	I-13 H-14	Q57 Q58	K-6 J-7	Q127	E-9				
IC29 IC30	E-16 E-13	Q59	J-8	Q128	D-10	TH1 TH2	I-1 I-5		
IC31	G-15	Q60 Q61	K−7 K−5	Q130 Q131	E-11 D-9	TH3	I-9		
IC32 IC33	L-16 M-13	Q62 Q63	K-6 H-8	Q132 Q133	E-10 E-12	TP1 TP2	C-6 D-5		
IC34 IC35	M-15 L-13	Q64 Q65	H-7 H-6	Q134	E-10	TP3	C-5		
IC36 IC37	D-16 C-16	Q66	H-8	Q135 Q136	E-9 E-9	TP5 TP6	L-2 J-3		
IC39	B-15	Q67 Q68	G-7 H-6	Q137 Q138	E-10 E-11	TP7 TP8	J−1 J−2		
IC40	J-14	Q69 Q70	G-6 F-6	Q139 Q140	D-11 D-9	TP9 TP10	J-3 F-1		
Q1 Q2	B-2 C-1	Q71 Q72	G-7	Q141	D-11	TP11	N-13		
Q3 Q4	C-4	Q73	G-8 G-7	Q142 Q144	D-14 G-14	TP13 TP14	L-6 J-7		
Q5	N-1 M-3	Q74 Q75	G-8 F-7	Q145 Q146	H-12 I-12	TP15 TP16	J-5 J-5		
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Q8 Q9	L-4 L-3	Q78	F-8	Q148 Q149	K-3 J-1	TP18 TP19	E-5 N-14		
Q10 Q11	L-3	Q79 Q80	F-8 E-5	Q150 Q151	K−1 K−1	TP21 TP22	L-9 J-10		
Q12	K-2 J-3	Q81 Q82	E-6 N-8	Q152 Q153	K-1 K-7	TP23 TP24	J-9 K-10		

PR-130 1-

PR-130 BOARD

Serial No. 10301 - 10500 (UC) 30301 - 30400 (J) 40301 - 40600 (AE)



1-632-993-12 COMPONENT SIDE



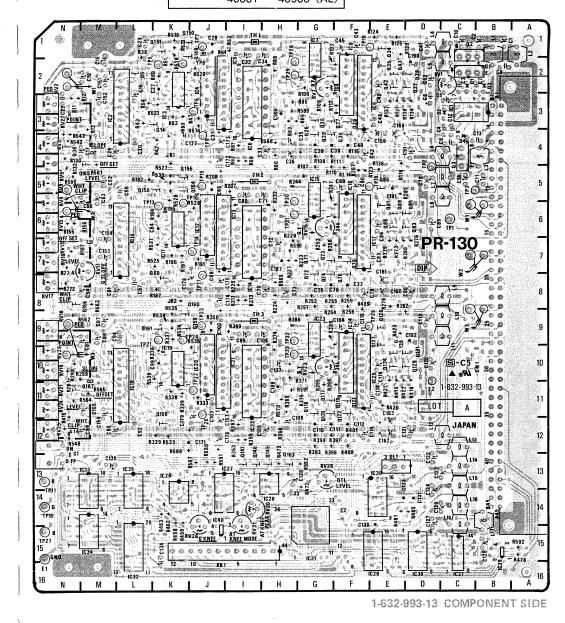
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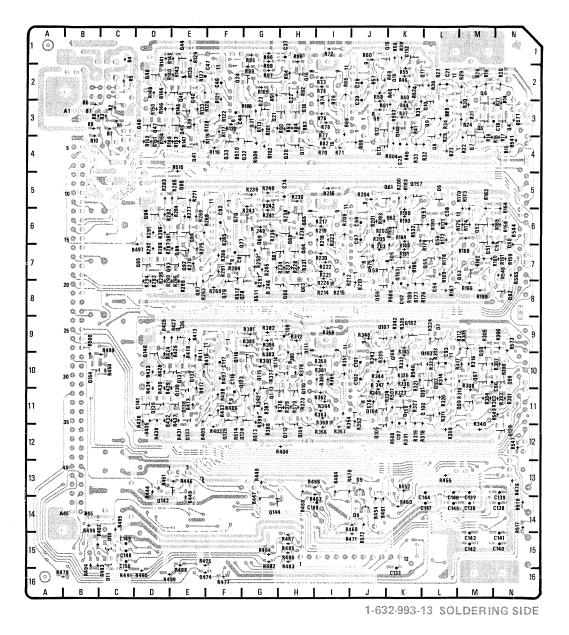
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PR-130 1-

PR-130 BOARD

Serial No. 10501 - 10800 (UC) 30401 - 30600 (J) 40601 - 40900 (AE)





DL1 D9 D10 D11 E1 E2 IC1 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18 IC19 IC20 IC21 IC22 IC23 IC24 IC25 IC26 IC27 IC28 IC29 IC30 IC31 IC32 IC33 IC34 IC35 IC36 IC37 IC39 IC40 Q1 Q2 Q3 Q4 Q5 Q6 Q7

PR-130 1

CN1 DL1

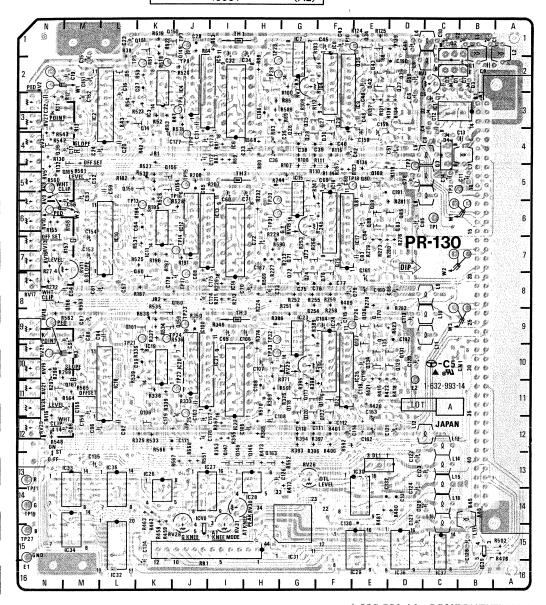
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D10 D11 E1 E2

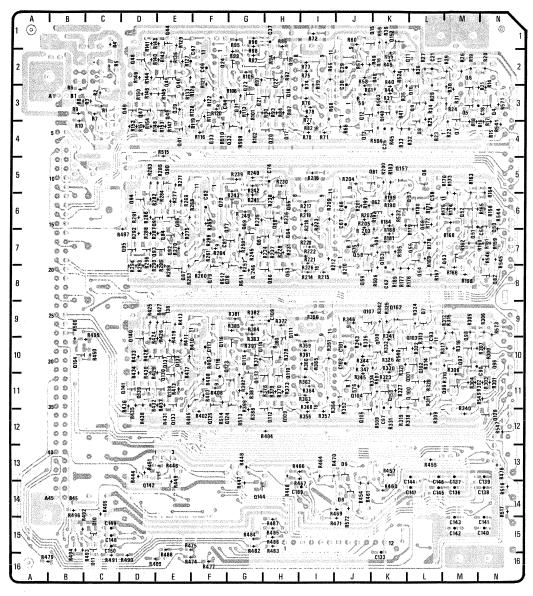
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IC12 IC13

Serial No. 10801 - (UC) 30601 - (J) 40901 - (AE)

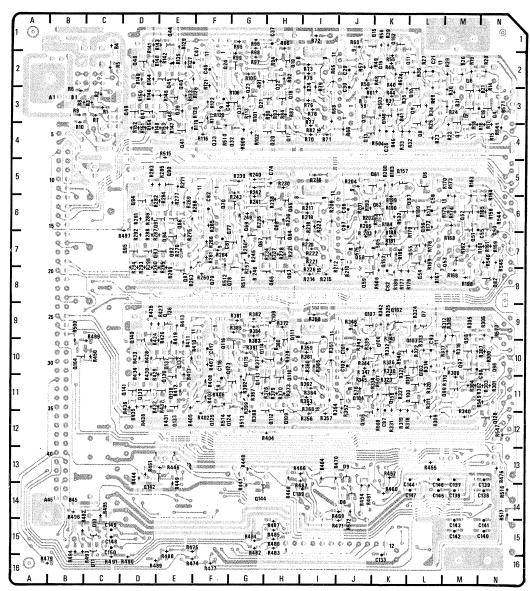


1-632-993-14 COMPONENT SIDE



1-632-993-14 SOLDERING SIDE

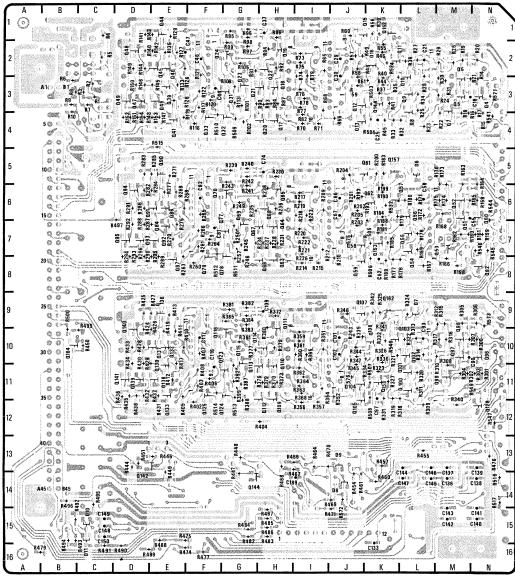
PR-130



1-632-993-13 SOLDERING SIDE

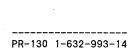
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CN1	B-10	Q12	J-3	Q82	N-8	Q153	K-7	TP21	K-9
DL1	E-13	Q13 Q14	J-4 K-3	Q83 Q84	D-6 E-7	Q154 Q155	J−5 L−5	TP22 TP23	J-11 J-9
D1	C-2	Q15 Q16	J−1 K−2	Q85	D-6	Q156	K-5	TP24	K-9
D2	C-3	Q17	K-2 H-4	Q86 Q87	E-6 E-8	Q157 Q158	K−5 K−11	TP25 TP26	J-12 E-9
D3	B-2	Q18	H-3	Q88	E-6	Q158	J-9	TP27	N-15
D4	C-4	Q19	H-2	Q89	E-6	Q160	J-8	TP28	H-1
D5	L-2	Q20	H-4	Q90	Ē-5	Q161	L-9	TP29	H-2
D6	L-5	Q21	G-3	Q91	D-6	Q162	K-9	TP30	H-6
D7	L-9	Q22	H-2	Q92	E-7	Q163	H-13	TP31	H-6
D8 D9	J−14 J−13	Q23 Q24	G-3	Q93	D-7	Q164	B-10	TP32	H-9
D10	0-13 C-15	Q24 Q25	F-2 G-3	Q94	D-6	Q165	M-5	TP33	H-10
D11	C-16	Q26	G-4	Q95	D-7	Q166	M-8		
	0 10	Q27	G-4 F-3	Q96 Q97	N-10	Q167 Q168	M-11		
E1	N-16	Q28	G-4	Q98	M-10 M-10	Q169	E-2 E-6		
E2	D-11	Q29	F-3	Q99	M-11	Q170	E-10		
		Q30	F-4	Q100	Ľ-11		2 10		
IC1	C-3	Q31	G-3	Q101	L-11	RB1	J-16		
IC2	M-3	Q32	G-4	Q102	L-10				
IC3	K-3	Q33	F-4	Q103	L-10	RV1	C-2		
IC4	J-2 I-2	Q34	E-1	Q104	J-11	RV2	N-2		
IC5 IC6	I-2 I-4	Q35	E-2	Q105	J-12	RV3	N-4		
IC7		Q36	N-4 D-2	Q106	K-11	RV5	N-5		
IC8	F-1	Q37 Q38	D-2 D-2	Q107	J-9	RV7	G-2		
IC9	E-3	Q39	E-3	Q108 Q109	K-10	RV8	N-5		
IC10	L-7	Q40	E-2	Q110	H-12 H-11	RV9 RV10	N-5 N-6		
IC11	K-7	Q41	E-4	Q111	H-9	RV10	M-7		
IC12	J-6	Q42	E-2	Q112	H-12	RV13	N-7		
IC13	1-6	Q43	E-2	Q113	G-11	RV15	G-6		
IC14	1-8	Q44	E-1	Q114	G-10	RV16	N-7		
IC15	G-5	Q45	E-2	Q115	G-10	RV17	N-8		
IC16	F-5	Q46	E-3		F-10	RV18	N-9		
IC17	E-7	Q47	D-3	Q117	G-11	RV19	N-10		
IC18 IC19	L-11 K-10	Q48	D-2	Q118	G-11	RV21	N-11		
IC20	J-10	Q49 Q50	D-3	Q119	F-11	RV23	G-10		
IC21	I-10	Q51	N−6 M−7	Q120	G-11	RV24	N-11		
IC22	I-12	Q52	M-6	Q121	F-11	RV25	N-12		
IC23	G-9	Q53	M-7	Q122	F-11	RV26	G-13		
IC24	F-9	Q54	Ľ-8	Q123 Q124	F-10 F-12	RV27 RV28	N-3		
IC25	E-10	Q55	L-7		F-12	RV28	J−15 N−10		
IC26	K-13	Q56	L-6	Q126	E-9	RV23	H-14		
IC27	I-13	Q57	L-6	Q127	E-9	RV31	I-15		
IC28	H-14	Q58 Q59	J-7	Q128	N-12	11101			
IC29 IC30	E-16 E-13	Q59 Q60	J−8 K−8	Q129 Q130	D-10 E-11	· S1	N-13		
IC31	G-15	Q61	J-5	Q131	D-9	TH1	I-1		
IC32	L-16	Q62	K-6	Q132	E-10	TH2	I-5		
IC33	M-13	Q63	H-8	Q133	E-12	TH3	I-9	:	
IC34	M-15	Q64	H-7	Q134	E-10				
IC35	L-13	Q65	H-6	Q135	E-10	TP1	C-6		
IC36 IC37	D-16 C-16	Q66 Q67	H-8	Q136	E-9	TP2	D-4		
IC39	B-15	Q68	G-7 H-6	Q137	E-10	TP3	C-5		
IC40	J-14	Q69	G-6	Q138	E-11	TP5	L-2		
1040	V 14	Q70	F-6	Q139 Q140	D-11 D-10	TP6 TP7	J-3 J-1		
21	B-2	Q71	G-7			TP8	J-1 J-2		
22	C-1	Q72	G-8	Q141 Q142	D-11 D-14	TP9	J-2 J-4		
23	C-4	Q73	G-7	Q144	G-14	TP10	5-4 F-1		
24	N-3	Q74	G-8	Q145	H-13	TP11	N-13		
25	M-3	Q75	F-7	Q146	I-13	TP13	K-6		
26	M-2	Q76	F-8	Q147	I-13	TP14			
27	M-4	Q77	G-7	Q148	K-3	TP15	-J-5		
28	L-4	Q78	G-8	Q149	J-1	TP16	J-5		
29	L-3	Q79	F-8	Q150	K-1	TP17	J-8		
210	L-3	Q80	E-5	Q151	K-1	TP18	E-5		
Q11	K-2	Q81	E-6	Q152	K-1	TP19	N-14		

PR-130

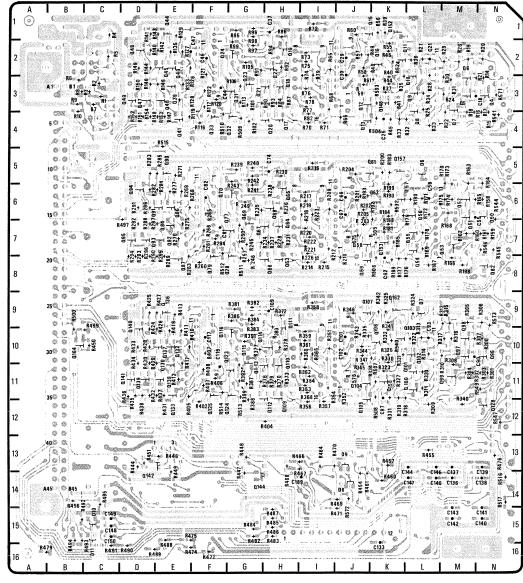


1-632-993-12 SOLDERING SIDE

C-48 (b)



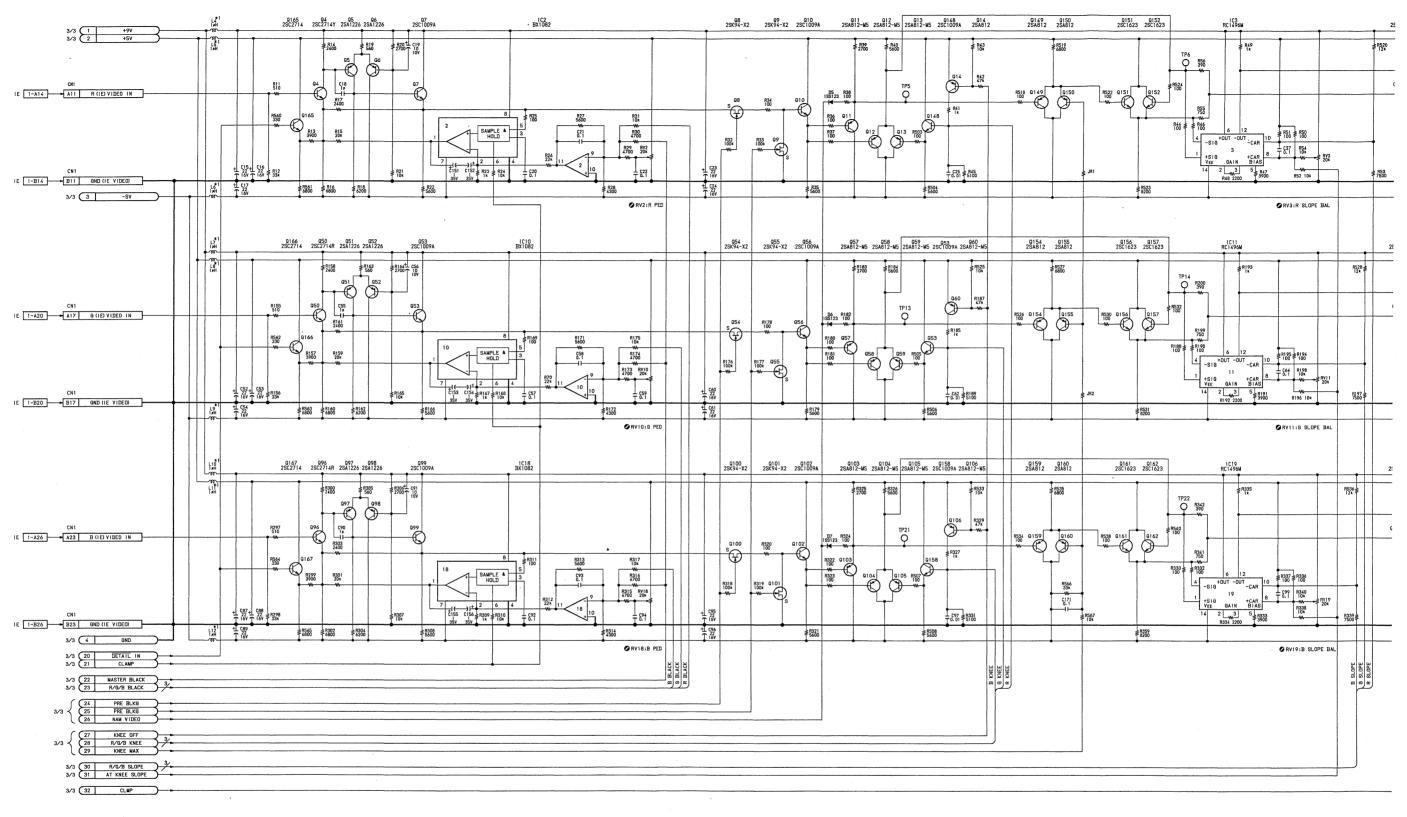
PR-130



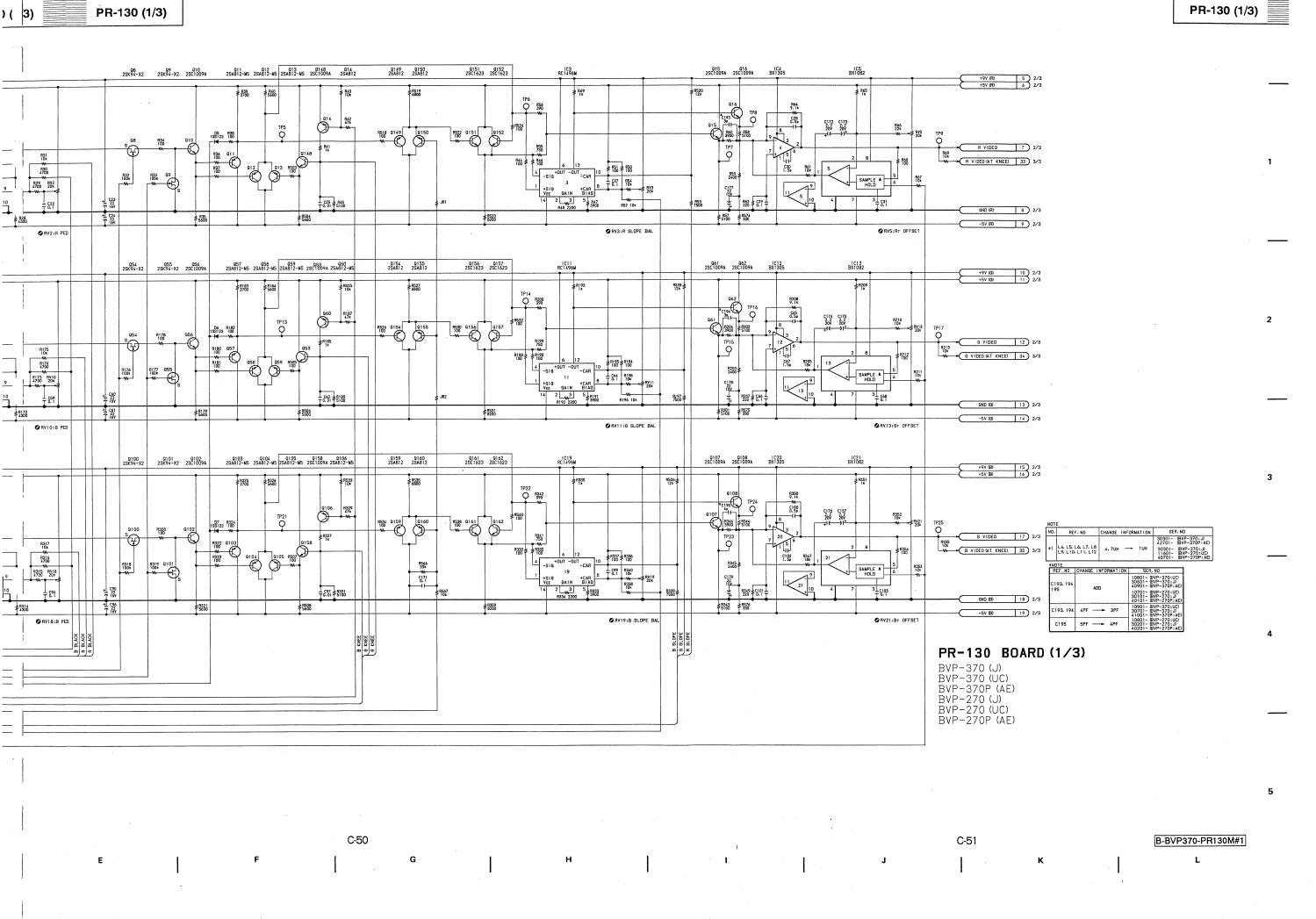
1-632-993-14 SOLDERING SIDE

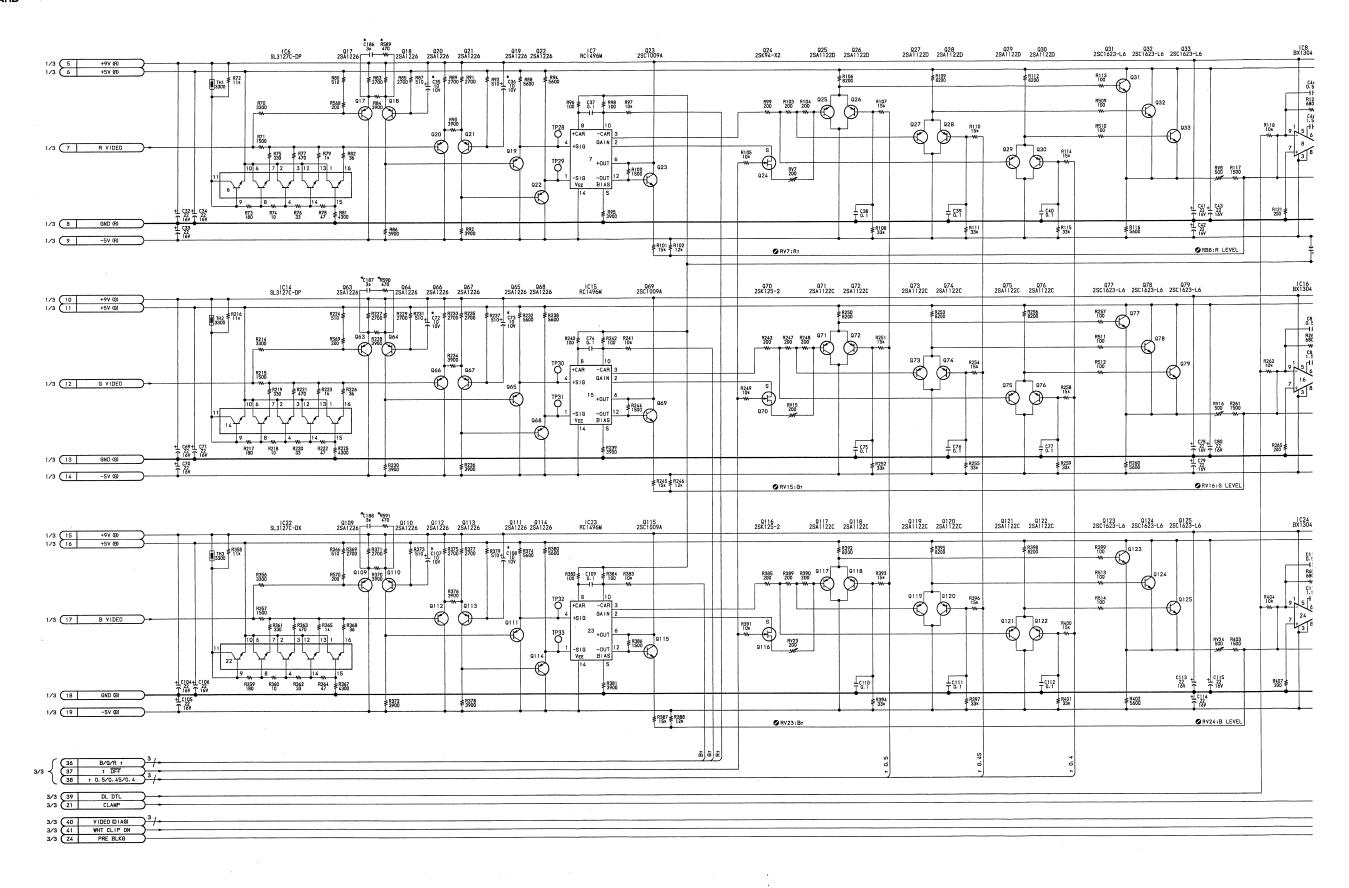
PR-130) 1-632-99 	3-14 							
0111	D. 10	010		000	N 0	0152	V 7	TDO1	K-9
CN1	B-10	Q12 Q13	J−3 J−4	Q82 Q83	N-8 D-6	Q154	K−7 J−5	TP22	J-11
DL1	E-13	Q14 Q15	K−3 J−1	Q84 Q85	E-7 D-6	Q155 Q156	L-5 K-5	TP23 TP24	J-9 K-9
D1	C-2	Q16	K-2	Q86	E-6	Q157	K-5	TP25	J-12
D2:	C-3	Q17	H-4	Q87	E-8	Q158	K-11		E-9
D3	B-2	Q18	H-3	Q88	E-6	Q159	J-9	TP27	N-15
D4	C-4	Q19	H-2	Q89	E-6	Q160	J-8	TP28	H-1
D5	L-2	Q20	H-4	Q90	E-5	Q161	L-9		H-2
D6	L-5	Q21	G-3	Q91	D-6	Q162	K-9		H-6
D7	L-9	Q22 Q23	H-2	Q92 Q93	E-7 D-7	Q163 Q164		TP31 TP32	H-6 H-9
D8 D9	J-14 J-13	Q23	G-3 F-2	Q94	D-1	Q165		TP33	H-10
D10	0-15 C-15	Q24 Q25	G-3	Q94 Q95	D-6 D-7	Q166	M-8	1133	H=10
D11	C-16	Q26	G-4	Q96	N-10	Q167	M-11		
D 11	0 10	Q27	F-3	Q97	M-10	Q168	E-2		
E1	N-16	Q28	G-4	Q98	M-10	Q169	E-6		
E2	D-11	Q29	F-3	Q99	M-11	Q170	E-10		
		Q30	F-4	Q100	L-11				
IC1	C-3	Q31	G-3 G-4	Q101	L-11	RB 1	J-16		
IC2	M-3	Q32	G-4 F-4	Q102	L-10	D) / 4			
IC3	K−3 J−2	Q33	F-4 E-1	Q103	L-10	RV1 RV2	C-2 N-2		
IC4 IC5	J-2 I-2	Q34 Q35	E-2	Q104 Q105	J-11 J-12	RV2	N-2 N-4		
IC6	I-2 I-4	Q36	N-4	Q105	K-11		N-5		
IC7	G-1	Q37	D-2	Q107	J-9		G-2		
IC8	F-1	Q38		Q108	K-10		N-5		
IC9	E-3	Q39	D-2 E-3	Q109	H-12	RV9	N-5		
IC10	L-7	Q40	E-2	Q110	H-11	RV10	N-6		
IC11	K-7	Q41	E-4	Q111	H-9	RV11	M-7		
IC12	J-6	Q42	E-2	Q112	⊔ 10	RV13	N-7		
IC13	I-6		E-2	Q113	G-11	RV15	G-6		
IC14	I -8	Q44	E-1	Q114	G-10 G-10	RV16	N-7		
IC15	G-5	Q45	E-2 E-3	Q115	G-10	RV17	N-8		
IC16	F-5	Q46		Q116	F-10 G-11 G-11	RV18	N-9		
IC17 IC18	E-7 L-11	Q47 Q48	D-3 D-2	0117	G-11	RV19 RV21	N-10 N-11		
IC19	K-10	Q49	D-2 D-3	Q119	F-11	RV21	G-10		
IC20	J-10	Q50	N-6	Q120	G-11	RV24	N-11		
IC21	I-10	Q51	M-7	Q121	F-11	RV25	N-12		
IC22	I-12	Q52	M-6	Q122	F-11	RV26	G-13		
IC23	G-9	Q53	M-7	Q123	F-10	RV27	N-3		
IC24	F-9	Q54	L-8	Q124	F-12	RV28	J-15		
IC25	E-10	Q55	L-7	Q125	F-12	RV29	N-10		
IC26	K-13	Q56	L-6	Q126	E-9	RV30	H-14		
IC27	I-13	Q57	L-6		E-9	RV31	I-15		
IC28 IC29	H-14 E-16	Q58 Q59	J−7 J−8	Q128 Q129	N-12 D-10	· S1	N-13		
IC30	E-13 G-15	Q60	K-8	Q130	E-11				
IC31	L-16	Q62	J−5 K−6	Q131	D-9 E-10	TH1			
IC33	M-13	Q63	H-8	Q133	E-12	TH2 TH3	I-5 I-9		
IC34	M-15	Q64	H-7	Q134	E-10	1113	1-3		
IC35	L-13	Q65	H-6	Q135	E-10	TP 1	C-6		
IC36	D-16	Q66	H-8	Q136	E-9	TP2	D-4		
IC37	C-16	Q67	G-7	Q137	E-10	TP3	C-5		
IC39	B-15	Q68	H-6	Q138	E-11	TP 5	L-2		
IC40	J-14	Q69	G-6	Q139	D-11	TP6	J-3		
Q1	P 0	Q70 Q71	F-6 G-7	Q140 Q141	D-10 D-11	TP7	J-1		
Q2	B-2 C-1	Q72	G-8	Q141	D-14	TP8 TP9	J-2 J-4		
Q3	C-4	Q73	G-7	Q144	G-14	TP10	5-4 F-1		
Q4	N-3	Q74	G-8	Q145	H-13	TP11	N-13		
Q5	M-3	Q75	F-7	Q146	I-13	TP13	K-6		
Q6	M-2	Q76	F-8	Q147	I-13	TP14	J-7		
Q7	M-4	Q77	G-7	Q148	K-3	TP15	J-5		
Q8	L-4	Q78	G-8	Q149	J-1	TP16	J-5		
Q9	L-3	Q79	F-8	Q150	K-1	TP17	J-8		
Q10	L-3	Q80	E-5	Q151	K-1	TP18	E-5		
Q11	K-2	Q81	E-6	Q152	K-1	TP19	N-14		

PR-130 (1/3) BOARD



BVP-370/P BVP-270/P A B C D E F G H

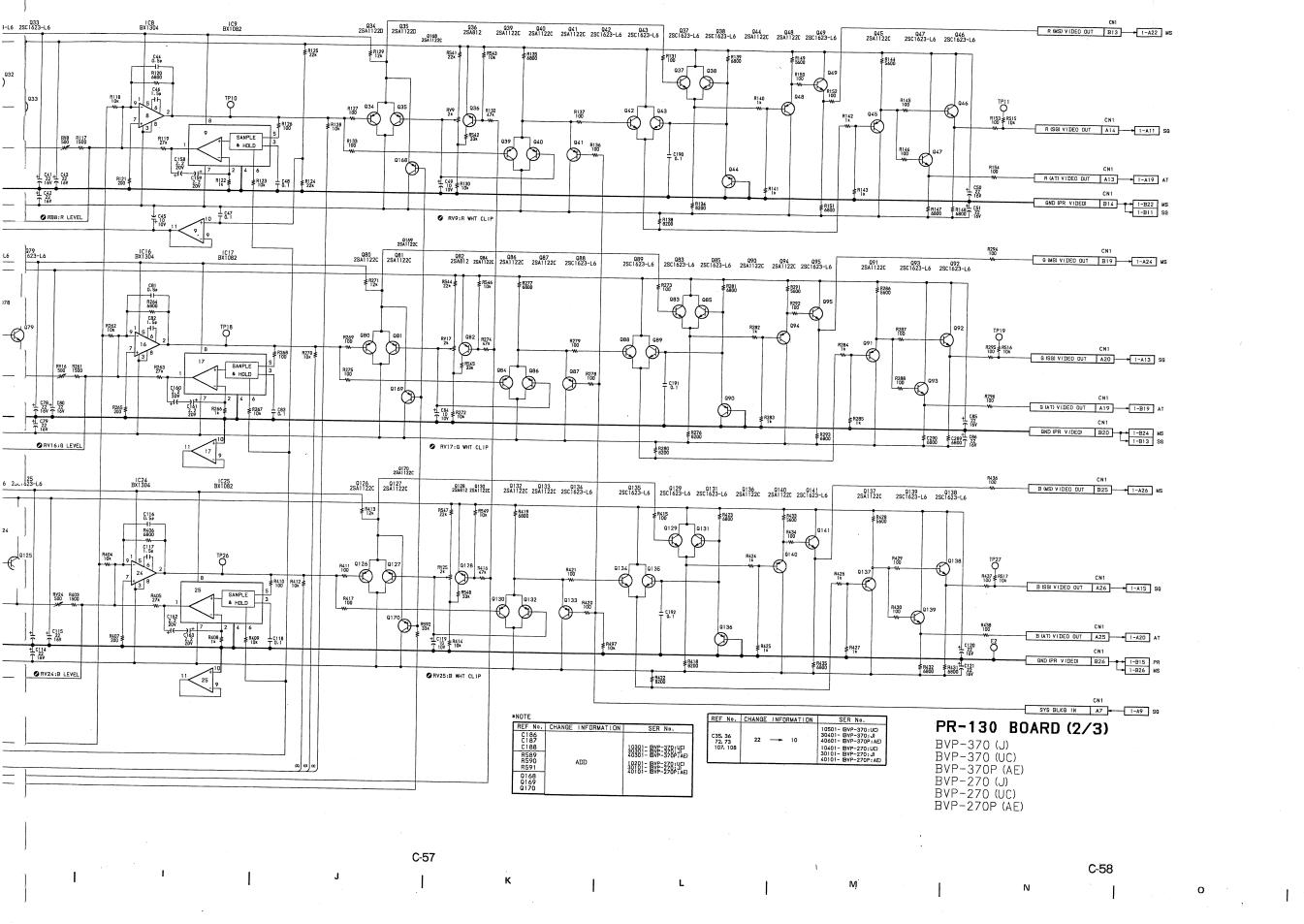




BVP-370/P BVP-270/P

C-55

C-56

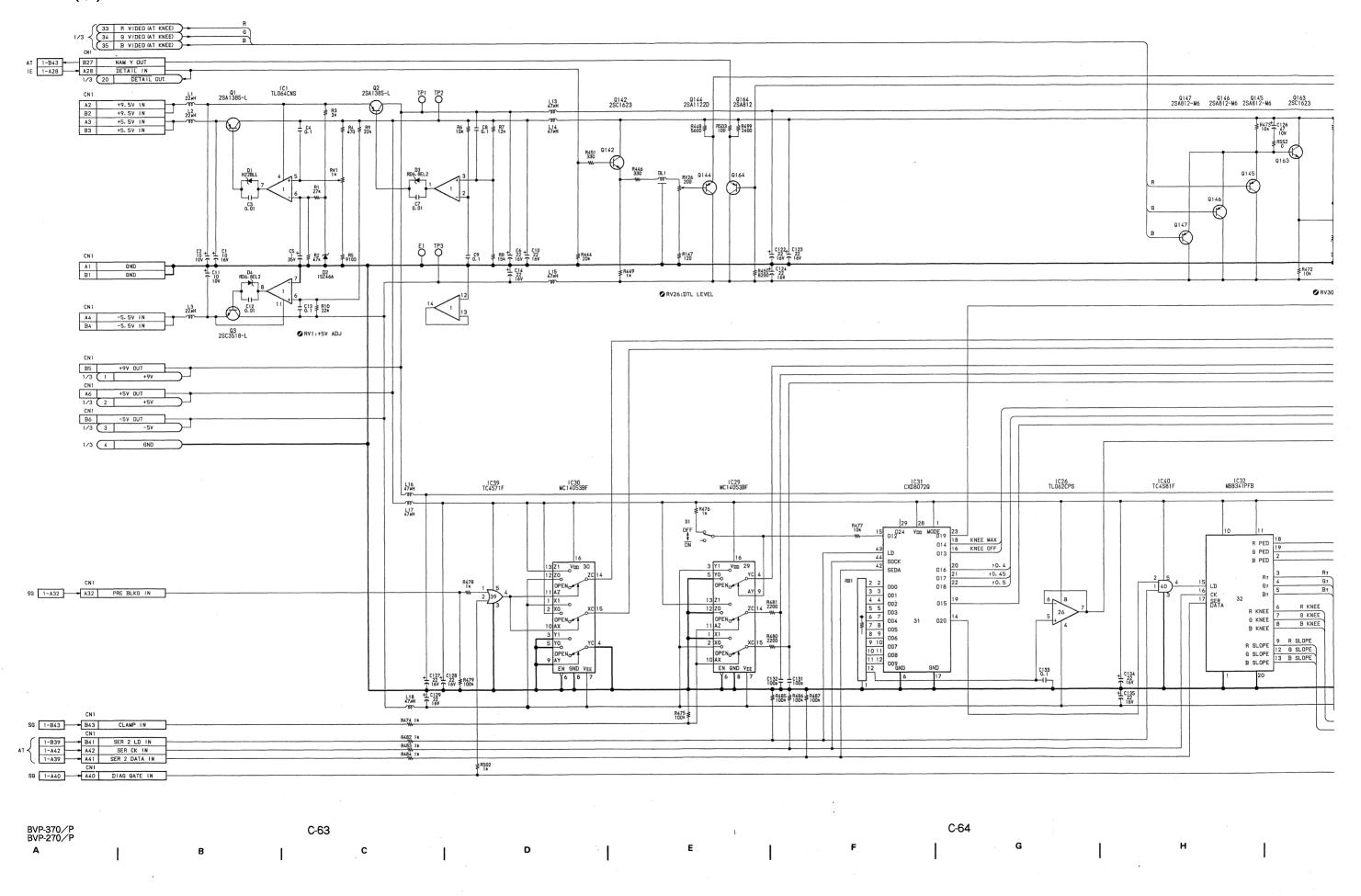


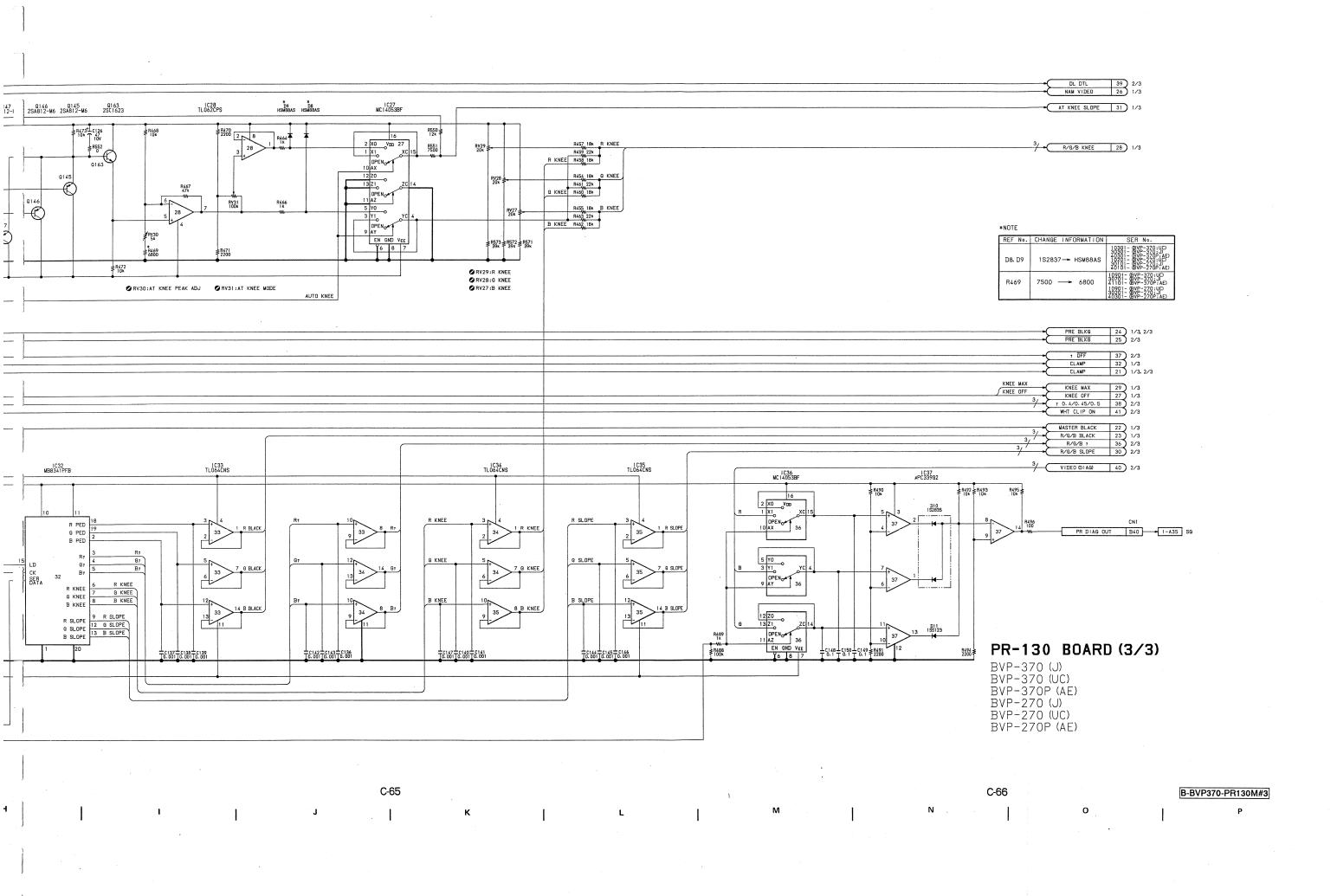
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B-BVP370-PR130M#2

P

PR-130 (3/3) BOARD

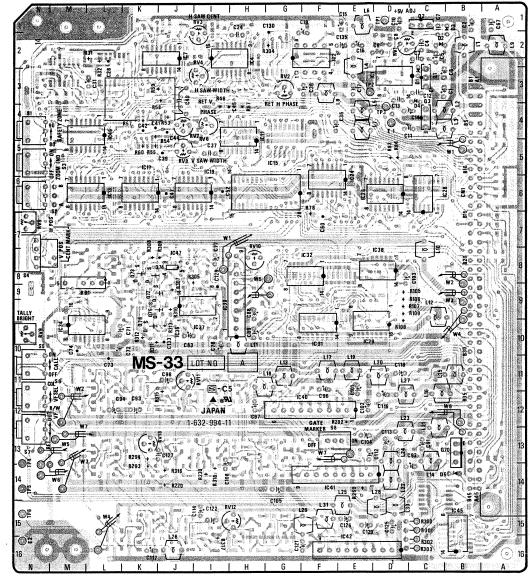






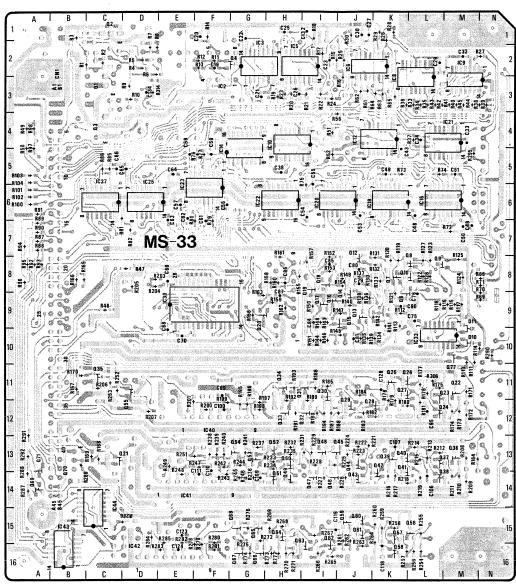
MS-33 BOARD

Serial No. 10001 - 10210 (UC) 30001 - 30205 (J) 40001 - 40210 (AE)



1-632-994-11 COMPONENT SIDE

MS-33 1-632-994-11



1-632-994-11 SOLDERING SIDE

CN1	B-6	Q14	J-9	RV4 RV5	I-2 N-7
n. 4		Q15	J-9		
D1	C-3	Q16	I –9	RV6	I-4
D2	C-2	Q17	I –9	RV7	J-4
D3	B-1	Q18	I –8	RV8	J-5
D4	C-4	Q19	I –8	RV9	N-10
D5	B-14	Q20	G-9	RV10	H-7
D10	M-10	Q21	C-13		
D11	M-9	Q22		′S1	N-4
011	141 5	Q23	M-11	S2	N-6
- 1	D 4		L-11	S3	M-5
E1	D-4	Q24	L-12		
E2	N-16	Q25	K-11	S4	N-8
		Q26	K-11	S5	N-10
IC1	D-3	Q27	K-11	S6	M-11
IC2	F-2	Q28	J-12	S7	N-13
C3	G-2	Q29	J-12	S8	F-13
IC4	H-2	Q30	I-11		
C5	H-2	Q31	H-11	TP1	D-1
IC6	J-2	Q32	I-12	TP2	E-3
C7	J-2	Q33	H-12	TP3	D-4
821	K-3			TP4	N-13
		Q34	H-11		
C9	M-2	Q35	C-11	TP5	N-14
C10	H-4	Q36	M-13	TP6	N-15
C11	H-4	Q37	L13		
C12	J-4	Q38	L-14		
C13	L-6	Q39	K-13		
C14	F-5	Q40	K-13		
C15	G-5	Q41	K-13		
216	L-6	Q42	K-13		
217	K-5	Q43	J-14		
C18	J-6	Q44	J-13		
219	I-5	Q45	I-13		
220	Ī-6	Q46	I-14		
C21	M-4	Q47	I-14		
C22	G-6	Q48	I-13		
C23	E-6	Q49	H-14		
C24	E-6	Q50	H-13		
C25	D-5	Q51	H-14		
C26	E-6	Q52	H-13		
227	C-5	Q53	G-13		
C28	C-6	Q54	G-13		
029	E-10	Q55	D-12		
C30	E-9	Q56	L-15		
031	F-10	Q57	K-15		
C32	F-8	Q58	K-16		
	L-10				
C33		Q59	J-15		
C34	M-10	Q60	J-15		
C37	I-10	Q61	J-15		
C38	D-8	Q62	I-15		
C39	I-9	Q63	I-16		
C40	F-12	Q64	H-15		
C41	F-14	Q65	G-15		
C42	E-16	Q66	G-16		
C43	B-15	Q67	G-16		
C44	C-14	Q68	G-15		
C45	B-15	Q69	A-14		
C46	L-4				
C47	J-8	Q70	B-13		
047	J-0	Q71	A-13		
	0.0	Q72	K-9		
1	C-3	Q73	K-8		
2	C-1	Q74	J-8		
13	C-3	Q75	K-9		
4	G-2	Q76	K-10		
6	K-9	Q77	M-11		
7 3	K-8 L-8	RB1	M-9		
9 10	L-8 L-8	RV1	D-2		
112	J-7	RV2	G-3		
113	J-9	RV3	I-1		

MS-33 1-

CN1

D1 D2 D3 D4 D5 D10

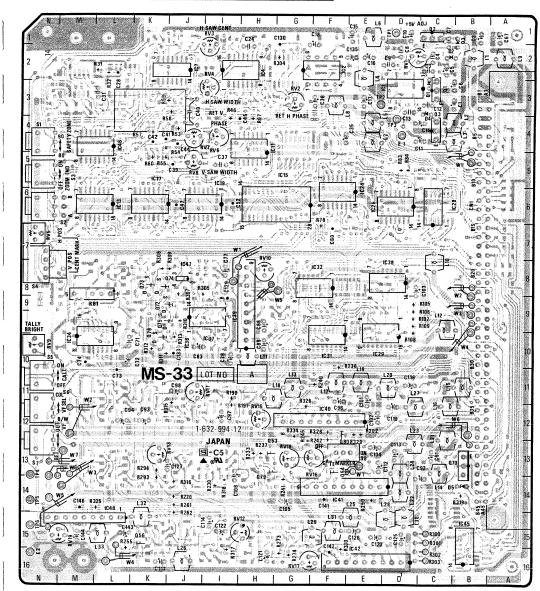
D11 E1 E2

IC1 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC11 IC12 IC13 IC14 IC15 IC15 IC17 IC17

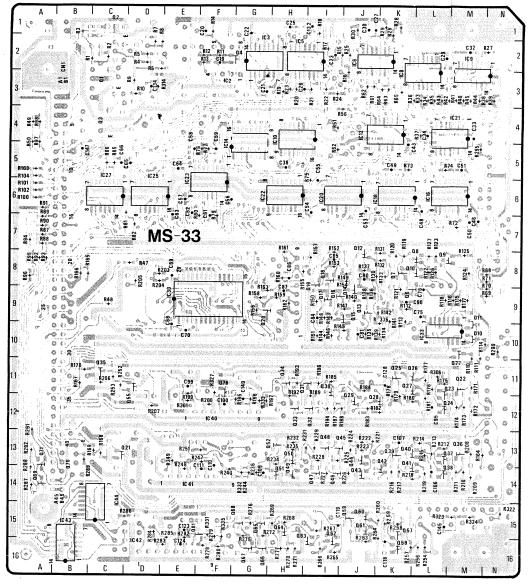
IC19
IC20
IC21
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IC25
IC26
IC27
IC28
IC29
IC30
IC31
IC32
IC33
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IC37
IC38
IC40
IC41
IC42
IC43
IC44
IC45
IC45
IC46
IC47
IC48

Q1 Q2 Q3 Q4 Q6 Q7 Q8 Q9 Q10 Q12

Serial No. 10301 - 10410 (UC) 30301 - 30305 (J) 40301 - 40420 (AE)



1-632-994-12 COMPONENT SIDE



1-632-994-12 SOLDERING SIDE

MS-33 1

CN1

D1 D2 D3 D4 D5 D10 D11

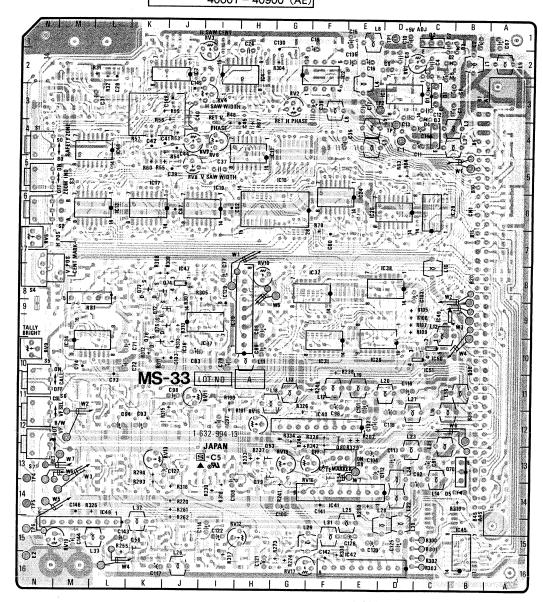
E1 E2

IC1 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC11

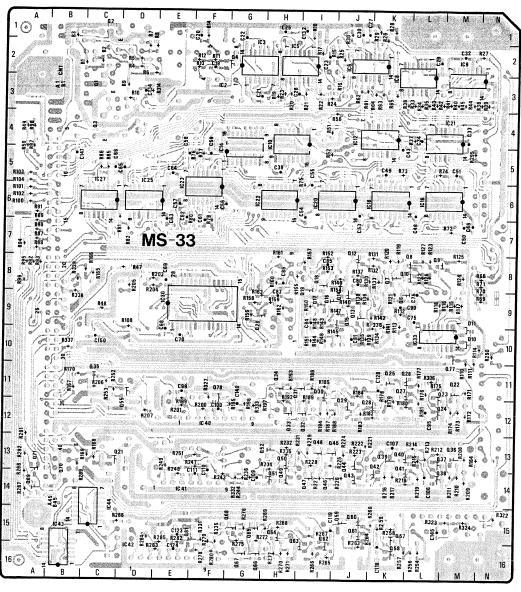
IC13 IC14 IC15 IC16 IC17 IC18 IC19

Q1 Q2 Q3 Q4 Q6 Q7 Q8

Serial No. 10501 - 10800 (UC) 30401 - 30600 (J) 40601 - 40900 (AE)

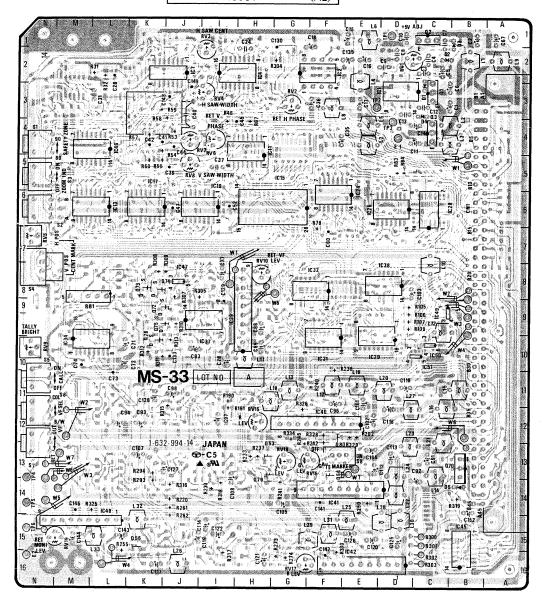


1-632-994-13 COMPONENT SIDE

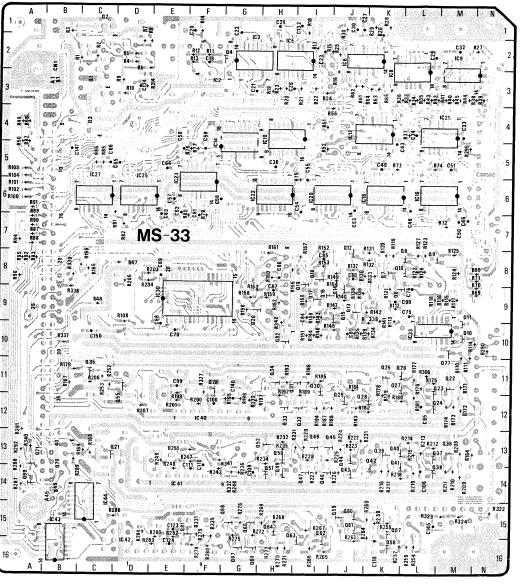


1-632-994-13 SOLDERING SIDE

Serial No. 10801 - (UC) 30601 - (J) 40901 - (AE)

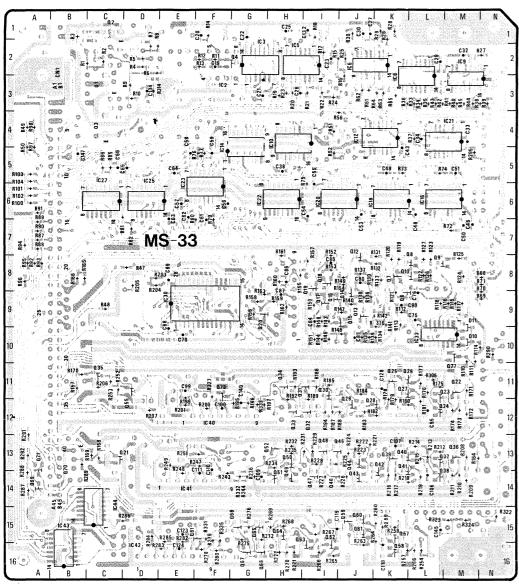


1-632-994-14 COMPONENT SIDE



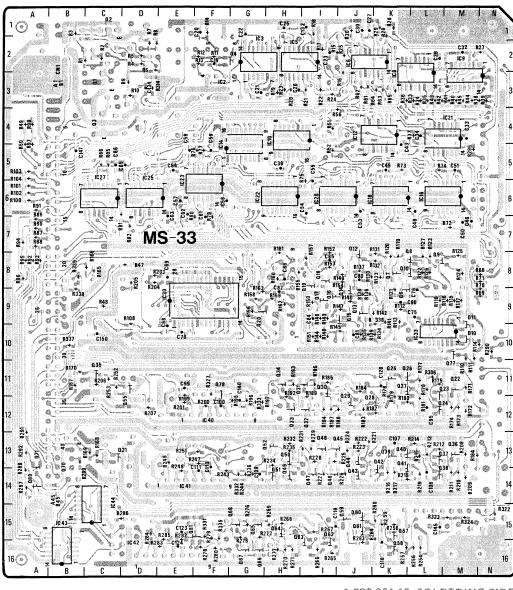
1-632-994-14 SOLDERING SIDE

MS-33 1-632-994-12



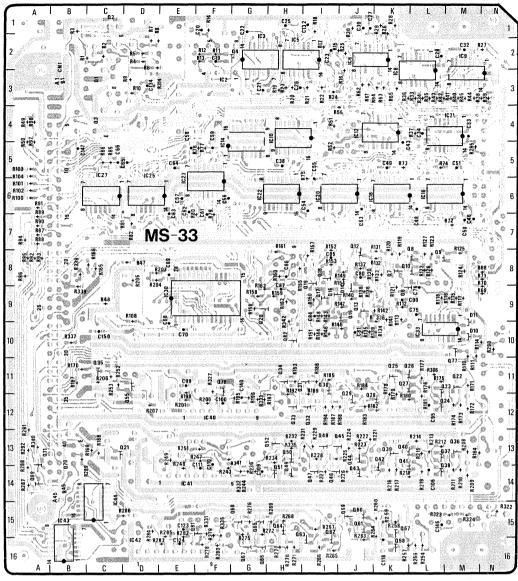
1-632-994-12 SOLDERING SIDE

CN1 B-6 Q13 J-9 Q14 J-9	RB1	M-9
D1 C-3 Q15 J-9 D2 C-2 Q16 I-9	RV1 RV2	D-2 G-3
D3 B-1 Q17 I-9 D4 C-4 Q18 I-8	RV3 RV4	I-1 I-2
D5 B-14 Q19 I-8 D10 M-10 Q20 G-9	RV5 RV6	N-7 I-4
D11 M-9 Q21 C-13 Q22 M-11 E1 D-4 Q23 L-11	RV7 RV8	J-4 J-5
E1 D-4 Q23 L-11 E2 N-16 Q24 L-12 Q25 K-11	RV9 RV10 RV15	N-1: H-7 H-1:
IC1 D-3 Q26 K-11 IC2 F-2 Q27 K-11	RV16 RV17	F-1: G-1
IC3 G-2 Q28 J-12 IC4 H-2 Q29 J-12	RV18 RV19	G-1: M-1
IC5 H-2 Q30 I-11 IC6 J-2 Q31 H-11 IC7 J-2 Q32 I-12	\$1	N-4
IC8 K-3 Q33 H-12 IC9 M-2 Q34 H-11	S2 S3 S4	N-6 M-5 N-8
IC10 H-4 Q35 C-11 IC11 H-4 Q36 M-13	S5 S6	N-10 M-1
IC12 J-4 Q37 L-13 IC13 L-6 Q38 L-14 IC14 F-5 Q39 K-13	\$7 \$8	N-1: E-1:
IC14 F-5 Q39 K-13 IC15 G-5 Q40 K-13 IC16 L-6 Q41 K-13	TP1 TP2	D-1 E-3
IC17 K-5 Q42 K-13 IC18 J-6 Q43 J-14	TP3 TP4	D-4 N-1
IC19 I-5 Q44 J-13 IC20 I-6 Q45 I-13	TP5 TP6	N-1 N-1
IC21 M-4 Q46 I-14 IC22 G-6 Q47 I-14 IC23 E-6 Q48 I-13		
IC24 E-6 Q49 H-14 IC25 D-5 Q50 H-13		
IC26 E-6 Q51 H-14 IC27 C-5 Q52 H-13		
IC28 C-6 Q53 H-13 IC29 E-10 Q54 F-13		
IC30 E-9 Q55 D-12 IC31 F-10 Q56 K-15 IC32 F-8 Q57 K-15		
IC33 L-10 Q58 K-16 IC34 M-10 Q59 J-15		
IC37 I-10 Q60 J-15 IC38 D-8 Q61 J-15		
IC39 I-9 Q62 I-15 IC40 F-12 Q63 I-16 IC41 F-14 Q64 H-15		
IC41 F-14 Q64 H-15 IC42 E-16 Q65 G-15 IC43 B-15 Q66 G-16		
IC44 C-14 Q67 G-16 IC45 B-15 Q68 G-15		
IC46 L-4 Q69 A-14 IC47 J-8 Q70 B-13		
IC48 L-14 Q71 A-13 Q72 K-9 Q1 C-3 Q73 K-8		
Q2 C-1 Q74 J-8 Q3 C-3 Q75 K-9		
Q4 G-2 Q76 K-10 Q6 K-9 Q77 M-11		
Q7 K-8 Q78 F-11 Q8 L-8 Q79 H-14		
Q9 L-8 Q80 F-13 Q10 L-8 Q81 E-15 Q12 J-7		



1-632-994-13 SOLDERING SIDE

C-69 (c)

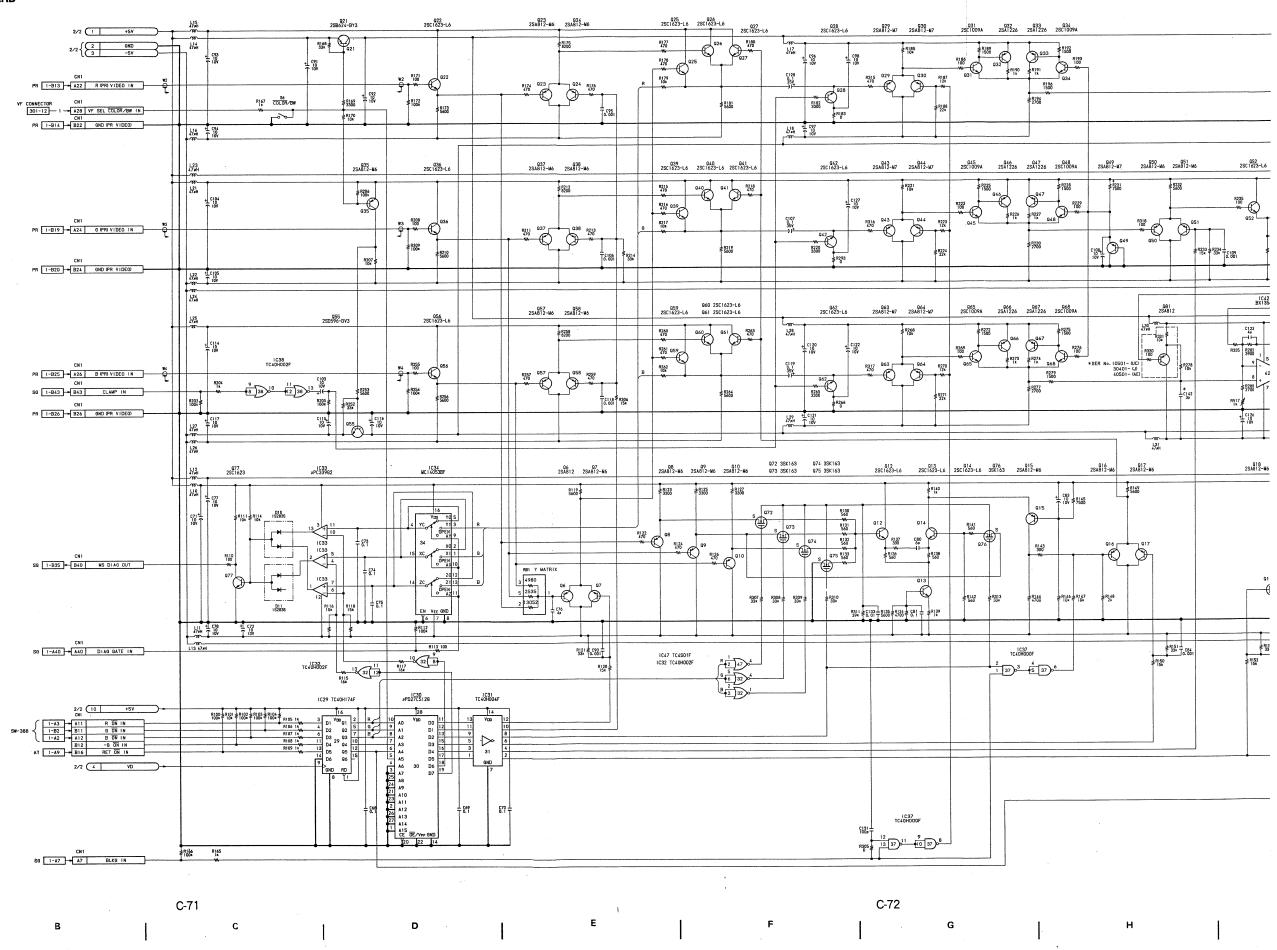


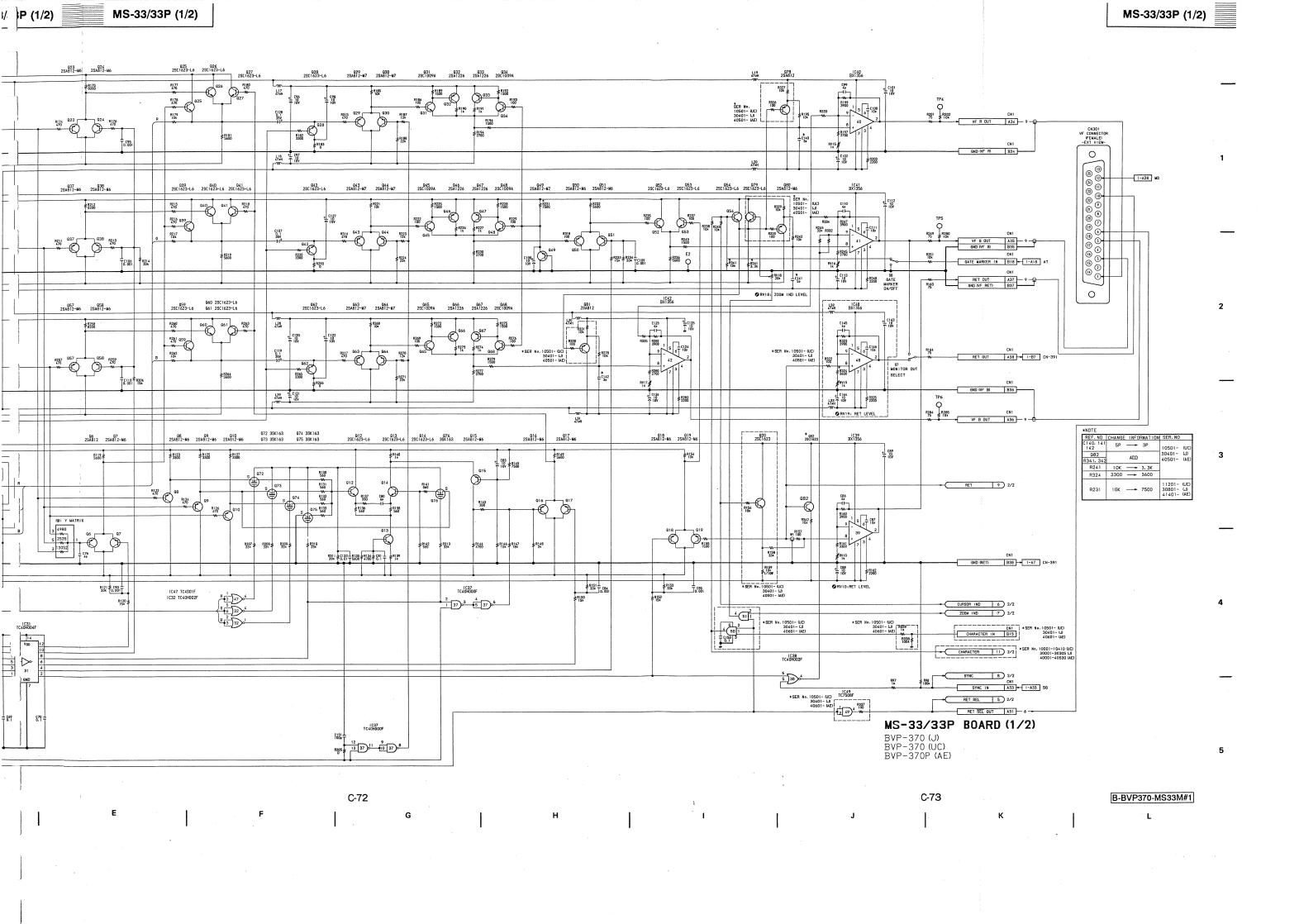
1-632-994-14 SOLDERING SIDE

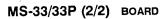
MS-33/33P 1-632-994-14

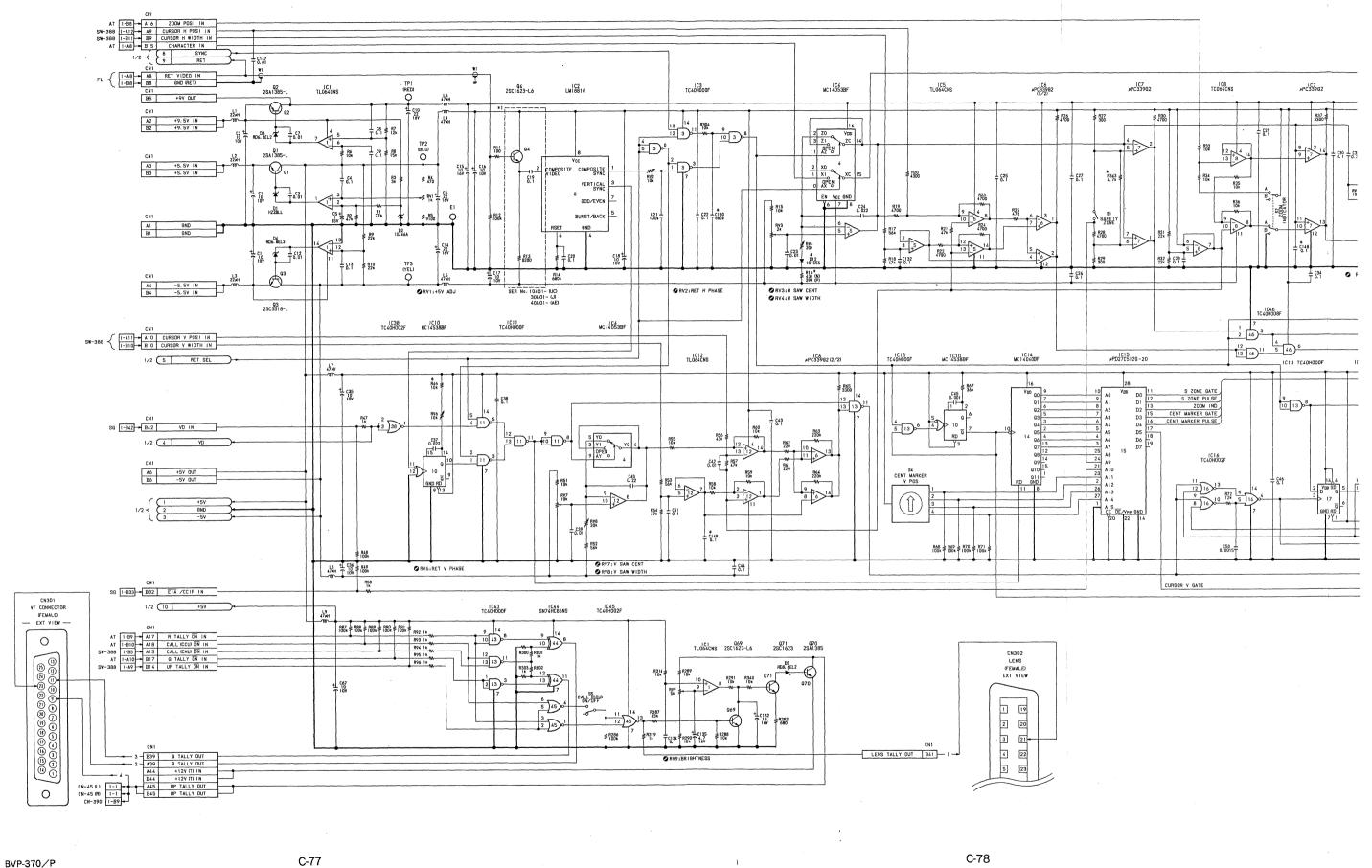
CN1 D1 D2 D3 D4 D5 D10 D11 D12 E1 E2	B-6 C-3 C-2 B-1 C-4 B-14 M-10 M-9 I-2 D-4 N-16	Q8 Q9 Q10 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21	L-8 L-8 J-7 J-9 J-9 J-9 I-9 I-8 I-8 G-9 C-13	Q79 Q80 Q81 Q82 RB1 RV1 RV2 RV3 RV4 RV5 RV6	H-13 F-12 E-15 H-10 L-9 D-2 G-3 I-1 I-2 N-7 I-4
IC1 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9	D-3 F-2 G-2 H-2 J-2 J-2 K-3 M-2	Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31	M-11 L-11 L-12 K-11 L-11 K-11 K-12 J-12 I-11 I-11	RV7 RV8 RV9 RV10 RV15 RV16 RV17 RV18 RV19	J-4 J-5 N-10 H-7 H-12 F-13 G-16 G-13
IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18 IC19 IC20 IC21 IC22 IC23 IC24 IC25 IC26 IC27 IC28 IC29 IC30 IC31 IC32 IC33 IC34 IC32 IC33 IC34 IC40 IC40 IC41 IC42 IC43 IC44 IC45 IC46 IC47 IC48 IC49 IC50 IC51	H-4 H-4 J-6 K-5 K-6 K-6 K-6 K-6 K-6 K-6 K-6 K-6 K-6 K-6	Q32 Q33 Q34 Q35 Q36 Q37 Q38 Q39 Q40 Q41 Q42 Q43 Q44 Q45 Q46 Q47 Q48 Q50 Q51 Q55 Q56 Q57 Q58 Q60 Q61 Q62 Q63 Q66 Q67 Q68 Q69 Q71 Q72	I-12 H-11 C-11 C-113 L-13 K-13 K-13 I-14 I-13 I-14 H-13 H-15 K-15 K-15 K-15 K-15 H-15 K-15 K-15 K-15 K-15 K-15 K-15 K-16 K-17 H-18 K-18 H-18 K-18 H-18 H-18 H-18 H-18 H-18 H-18 H-18 H	\$1 \$2 \$3 \$4 \$5 \$6 \$7 \$8 \$7 \$1 \$7 \$2 \$7 \$7 \$6 \$7 \$7 \$7 \$7 \$7 \$7 \$7 \$7 \$7 \$7 \$7 \$7 \$7	N-4 M-6 M-5 N-8 N-10 M-11 N-13 D-1 N-13 D-1 N-14 N-15
Q1 Q2 Q3 Q4 Q6 Q7	C-3 C-1 C-3 G-2 K-9 K-8	Q73 Q74 Q75 Q76 Q77 Q78	K-8 J-8 K-9 K-10 M-11 F-11		

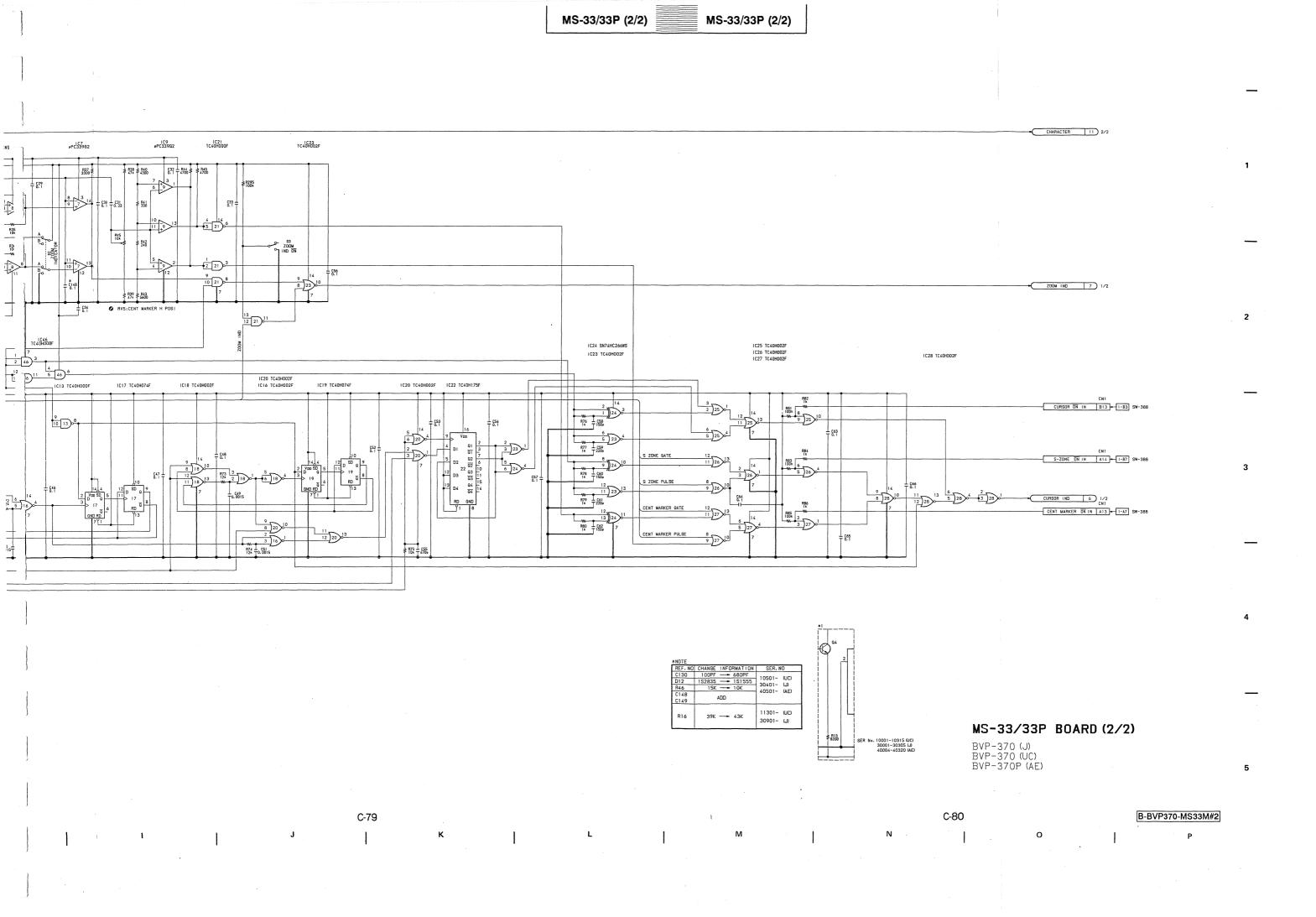
BVP-370/P





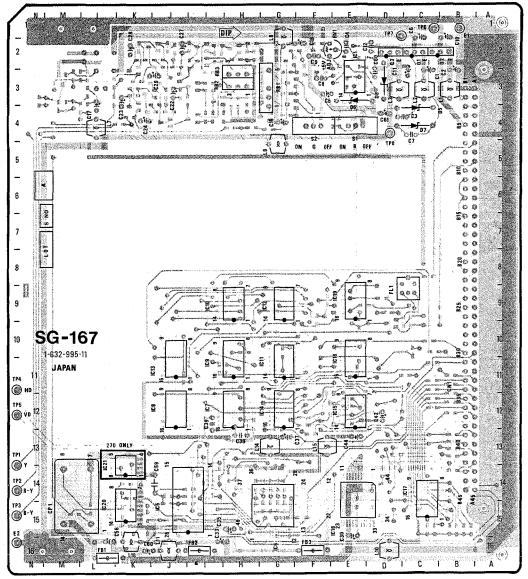




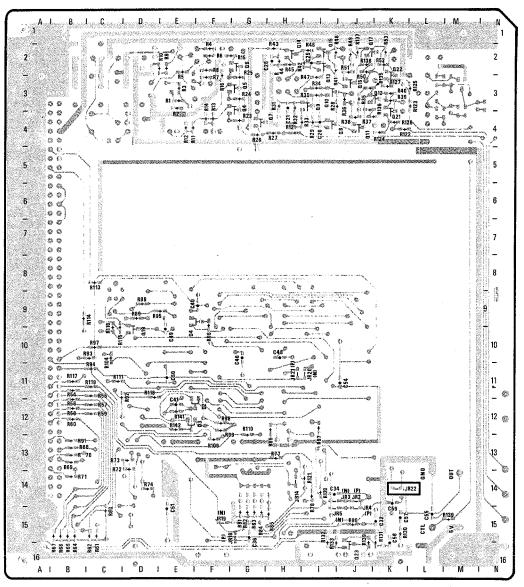


SG-167/167P/167AP BOARD

Serial No. 10001 - 10410 (UC) 30001 - 30305 (J) 40001 - 40420 (AE)



1-632-995-11 COMPONENT SIDE



1-632-995-11 SOLDERING SIDE

SG-16	57/167P/167A	P 1-632-	995-1
CN1	B-11	S1	E-4
CP1	M-15	S2	F-4
D2 D3 D4 D5 D6 D7 D8	F-12 F-12 E-10 C-4 E-4 C-4 D-3	TP1 TP2 TP3 TP4 TP5 TP6 TP7 TP8	N-1 N-1 N-1 N-1 N-1 C-1 D-1
E1 E2	B-1 N-15		
FB1 FB2 FB3	L-16 I-16 F-16		
FL1	D-9		
IC1 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC15 IC16 IC17 IC18 IC19 IC20	E-2 J-15 G-16 I-12 J-12 I-11 H-9 G-11 G-9 J-11 G-12 E-12 E-11 C-14 E-15 E-9 L-15		
JR3 JR5	J-14 I-15		
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q17 Q19 Q21 Q22 Q23	C-2 B-2 D-2 G-3 G-3 G-2 H-4 J-4 I-3 I-3 J-4 K-3 I-3 J-4 K-3 I-3 J-1 K-4 K-2 J-10 K-4 K-2 J-16		
RB1 RB2 RB3	G-3 I-3 I-3		
RV1	E-1	-	

BVP-370/P

SG-16

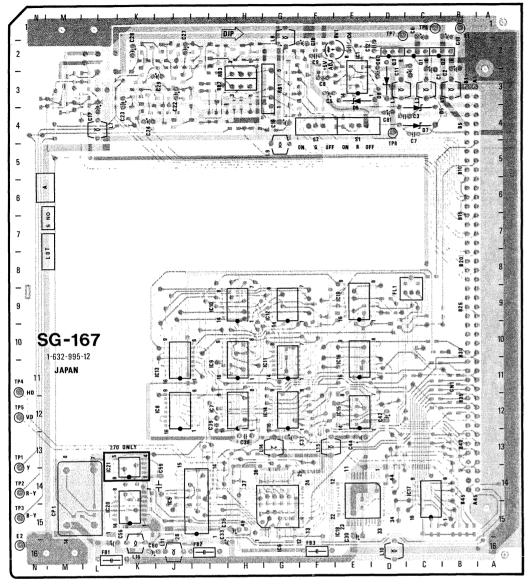
CN1

D2 D3 D4 D5 D6 D7 D8

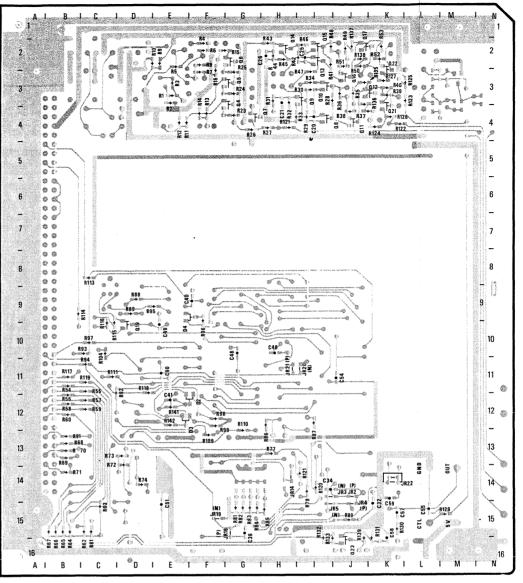
E1 E2

FB1 FB2 FB3

Serial No. 10501	_	(UC)
30401		(J)
40501	_	(AF)

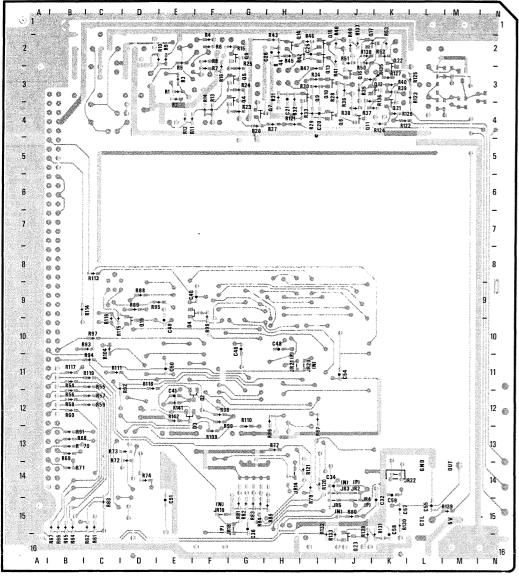


1-632-995-12 COMPONENT SIDE



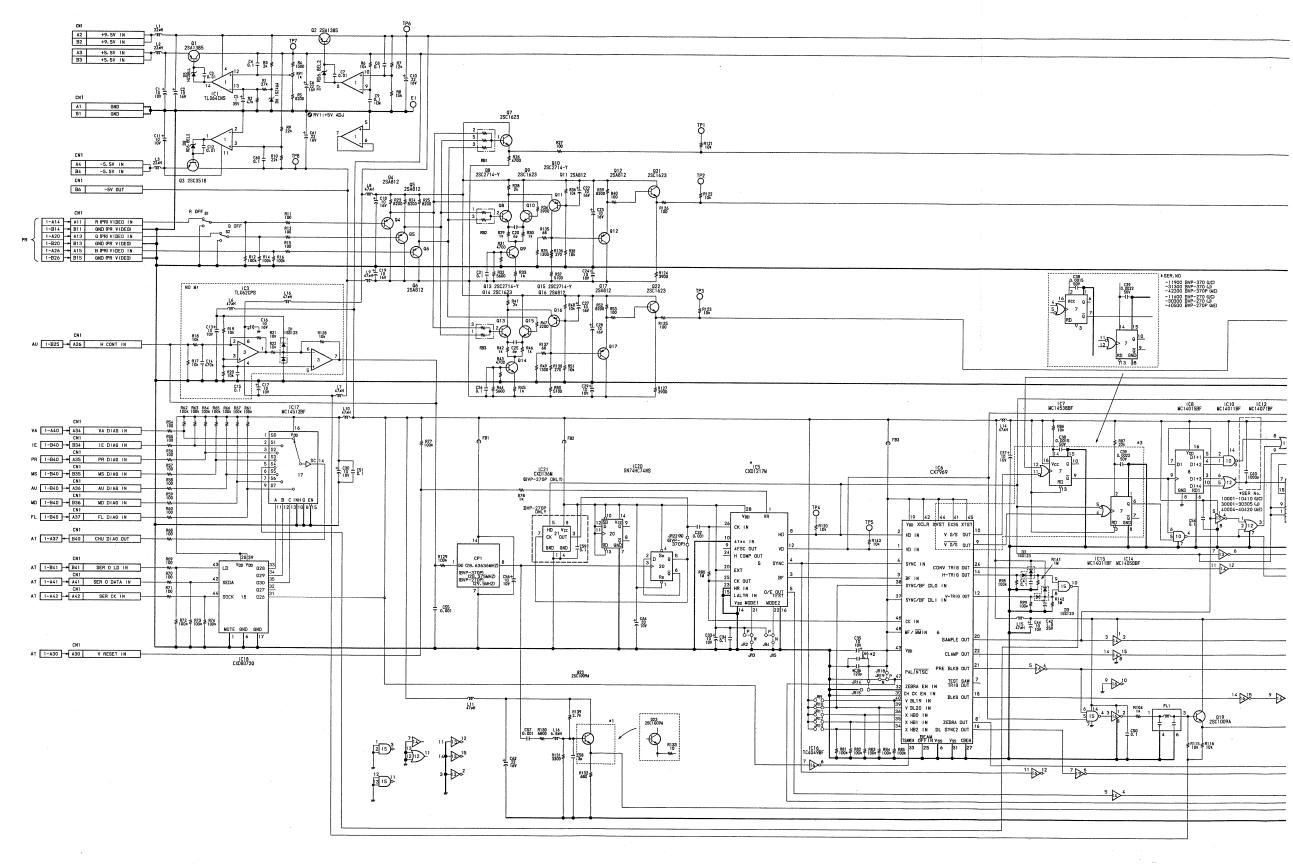
1-632-995-12 SOLDERING SIDE

S1 S2



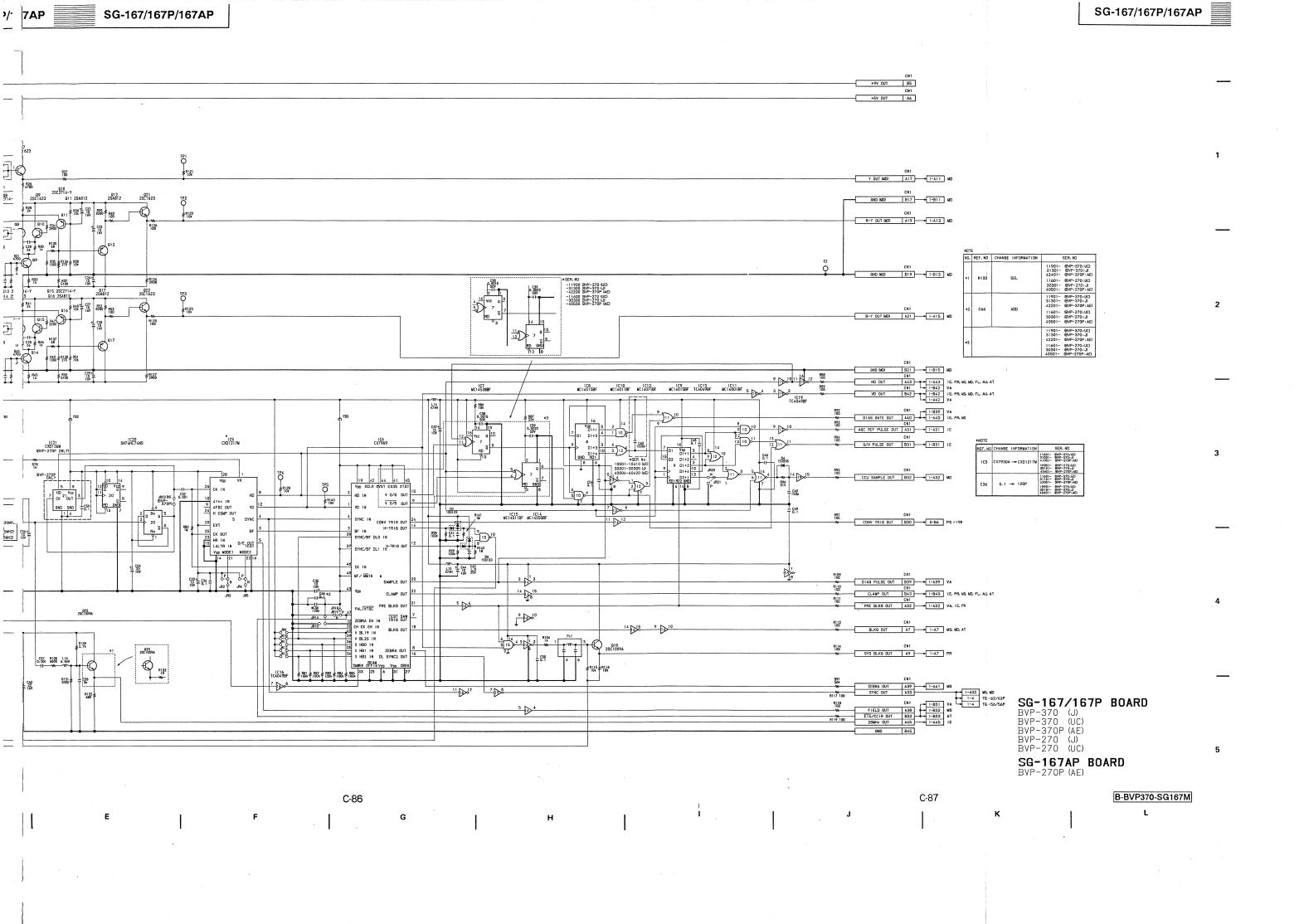
1-632-995-12 SOLDERING SIDE

SG-167	1-632-99	5-12	
CN1	B-11	TP1	N-1
CP1	M-15	TP2 TP3	N-1 N-1
D2 D3 D4 D5 D6 D7 D8	F-12 F-12 E-10 C-4 E-4 C-4 D-3	TP4 TP5 TP6 TP7 TP8	N-1 N-1 C-1 D-1
E1 E2	B-1 N-15		
FB1 FB2 FB3	L-16 I-16 F-16		
FL1	D-9		
IC1 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13 IC14 IC15 IC15 IC17 IC18 IC19 IC20	E-2 J-15 G-16 I-12 J-12 I-11 H-9 G-11 G-9 J-11 G-12 E-12 E-11 C-14 E-15 E-9 L-15		
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q19 Q21 Q22 Q23	C-2 B-2 D-2 G-3 G-3 G-2 H-4 J-4 I-3 I-3 J-4 K-3 I-3 H-2 I-2 J-3 J-1 D-10 K-4 K-2 J-16		
RB1 RB2 RB3	G-3 I-3 I-3		
RV1	E-1		
S1 S2	F-4 F-4		



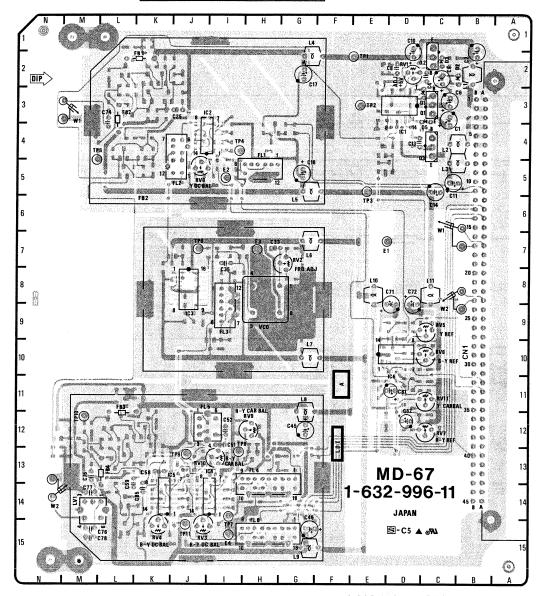
BVP-370/P C-85

A B C D E F G H

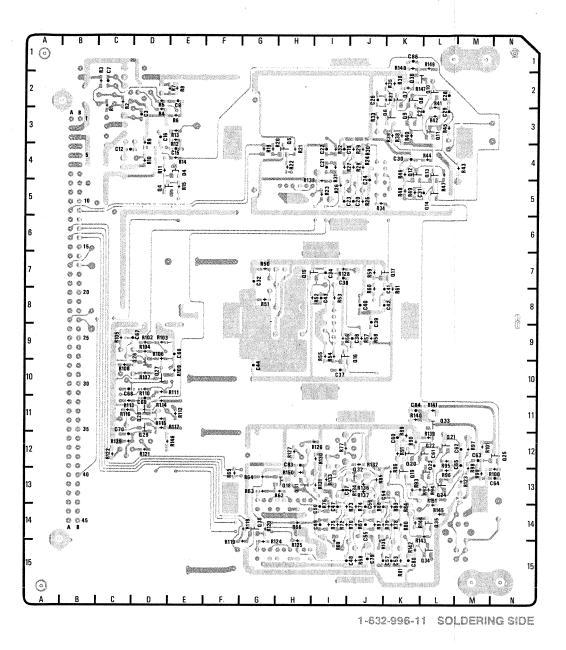


MD-67 BOARD

Serial No. 10001 - 10410 (UC) 30001 - 30305 (J) 40001 - 40420 (AE)



1-632-996-11 COMPONENT SIDE



FB4 FL1 FL2 FL3 FL4 FL5 FL6 IC1 IC2 IC3 IC4 IC5 IC6 LV1 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q20 Q21 Q22 Q23 Q24 Q25

Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q34 Q35

MD-67

CN1

D1 D2 D3 D4 D5

E2 E3 E4

FB1 FB2 FB3

MD-67

CN1

D2 D3

D4 D5 E1 E2 E3 E4

FB1 FB2

FB3 FB4

FL1

FL2 FL3

FL4

FL5

FL6

IC1

IC2 IC3 IC4 IC5

IC6 LV1

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10

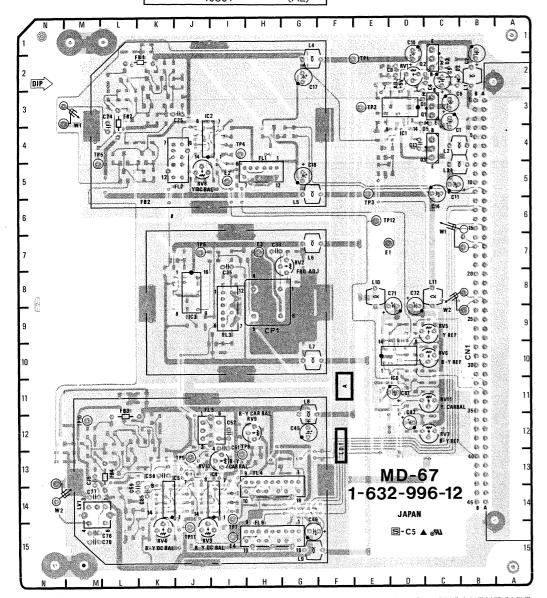
Q11 Q12 Q13 Q14

Q15 Q16 Q17 Q18 Q19

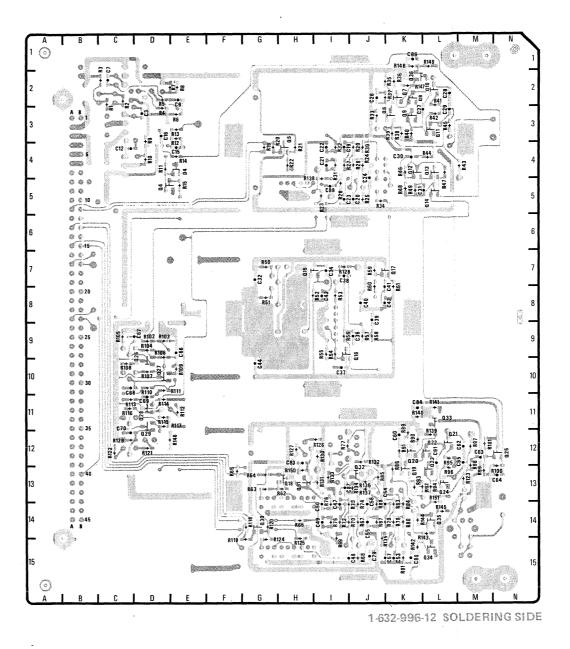
Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30

Q31 Q32 Q34 Q35

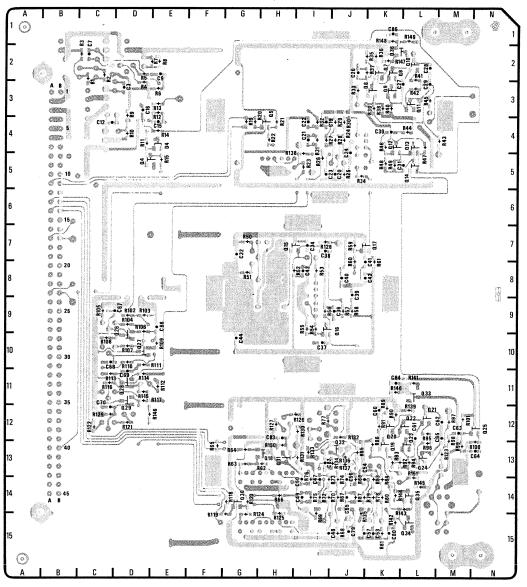
Serial No. 10501 - (UC) 30401 - (J) 40501 - (AE)



1-632-996-12 COMPONENT SIDE



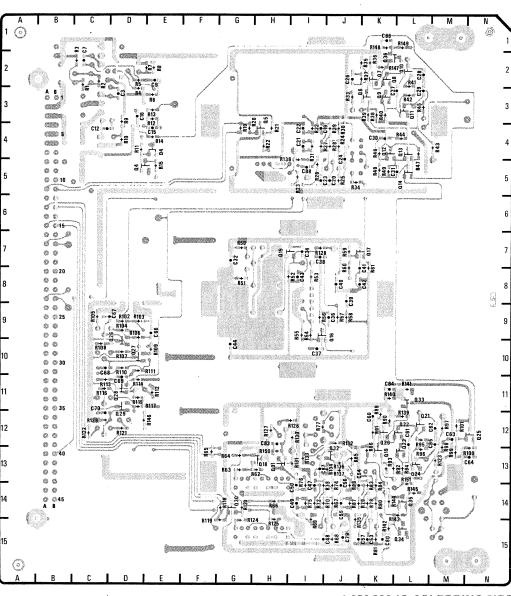
C-89 (b)



1-632-996-11 SOLDERING SIDE

MD-67 1	-632-996-1	1	
CN1	B-10	RV1 RV2	D-2 G-7
D1 D2 D3 D4 D5	D-3 C-2 C-2 E-4 C-4	RV3 RV4 RV5 RV6 RV7	J-1 K-1 C-9 C-1:
E1 E2 E3 E4	E-7 I-5 H-7 I-15	RV8 RV9 RV10 RV11	J-5 H-1: J-1: C-1
FB1 FB2 FB3 FB4	K-2 L-3 L-11 L-13	TP1 TP2 TP3 TP4 TP5	E-2 E-3 E-6 I-4 M-4
FL1 FL2 FL3 FL4 FL5 FL6	H-4 J-5 I-9 H-13 J-11 H-15	TP6 TP7 TP8 TP9 TP10 TP11	J-7 I-1! I-1: J-1: M-1: J-1!
IC1 IC2 IC3 IC4 IC5 IC6	D-4 J-3 J-9 I-13 K-13 D-10		
LV1	M-14		
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q23 Q24 Q25 Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q31 Q32 Q32 Q32 Q32 Q33 Q34 Q35 Q36 Q37 Q37 Q37 Q37 Q37 Q38 Q37 Q38 Q37 Q38 Q38 Q39 Q39 Q39 Q39 Q39 Q39 Q39 Q39 Q39 Q39	C-3 D-2 C-4 D-5 H-3 J-3 K-2 K-2 K-3 L-2 L-3 K-4 L-5 H-7 J-9 K-12 L-12 L-12 L-12 L-12 L-12 L-12 L-13 N-12 D-9 D-10 D-11 D-11 D-12 G-14 H-13 J-13 L-15 L-14 K-2		

MD-67



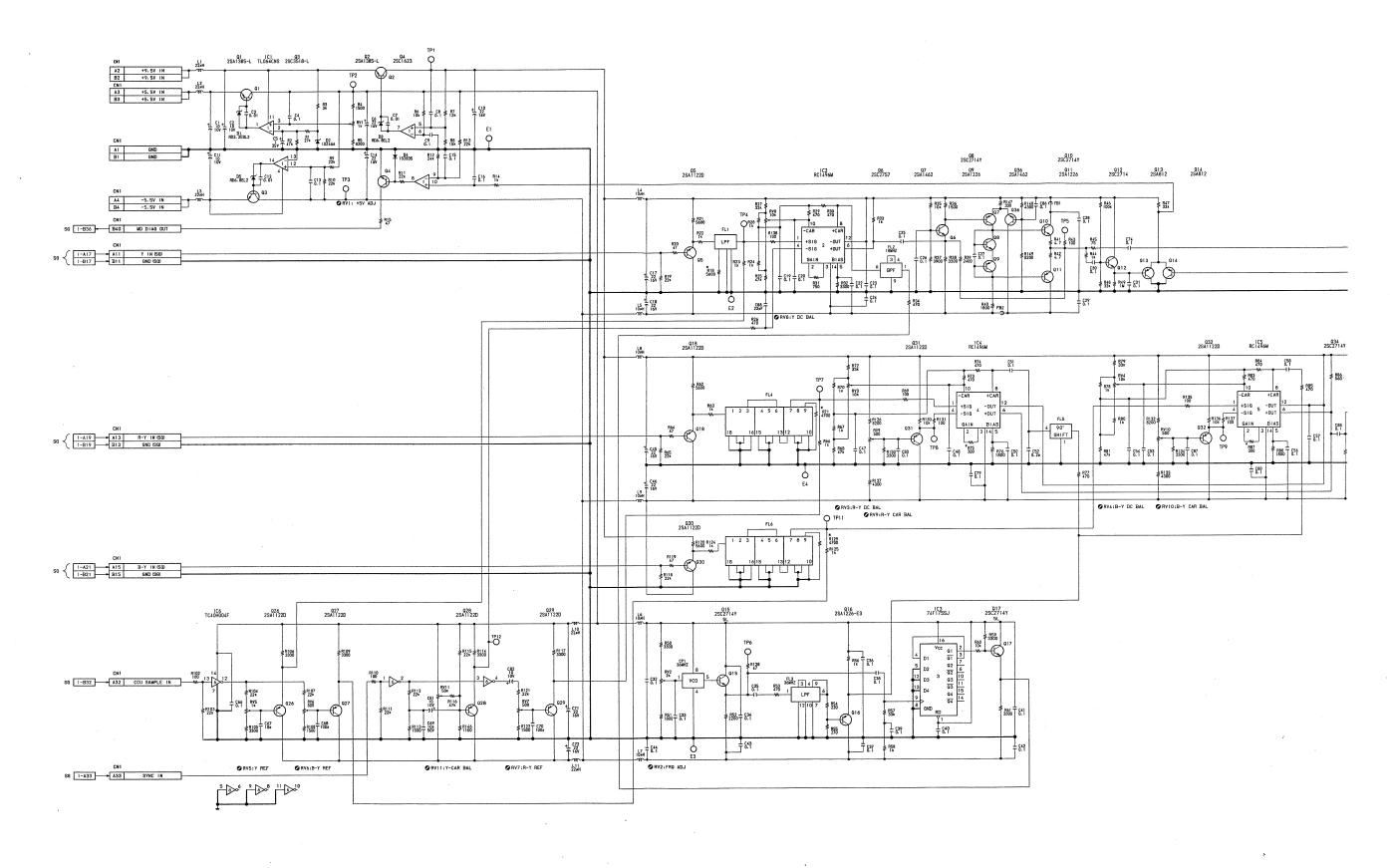
1-632-996-12 SOLDERING SIDE

MD-67	1-632-996	5-12 	
CN1	B-10	Q36	K-2
CP1	H-9	RV1	D-2
D1 D2 D3 D4 D5	D-3 C-2 C-2 E-4 C-4	RV2 RV3 RV4 RV5 RV6 RV7 RV8	G-7 J-15 K-15 C-9 C-10 C-12 J-5
E1 E2 E3 E4	E-7 I-5 H-7 I-15	RV9 RV10 RV11	H-12 J-13 C-11
FB1 FB2 FB3 FB4	K-2 L-3 L-11 L-13	TP1 TP2 TP3 TP4 TP5	E-2 E-3 E-6 I-4 M-4
FL1 FL2 FL3 FL4 FL5 FL6	H-4 J-5 I-9 H-13 J-11 H-15	TP6 TP7 TP8 TP9 TP10 TP11 TP12	J-7 I-15 I-12 J-13 M-12 J-15 E-6
IC1 IC2 IC3 IC4 IC5 IC6	D-4 J-3 J-9 I-13 K-13 D-10		
LV1	M-14		
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q20 Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q32 Q32 Q33 Q32 Q32 Q32 Q33 Q32 Q33 Q33	C-3 D-2 C-4 D-5 H-3 J-3 K-2 K-2 K-3 L-2 L-3 K-4 L-5 H-7 J-9 K-7 H-13 K-12 L-12 L-12 L-12 L-12 L-13 N-12 D-9 D-10 D-11 D-11 D-11 D-11 D-11 L-13 L-14 L-14		

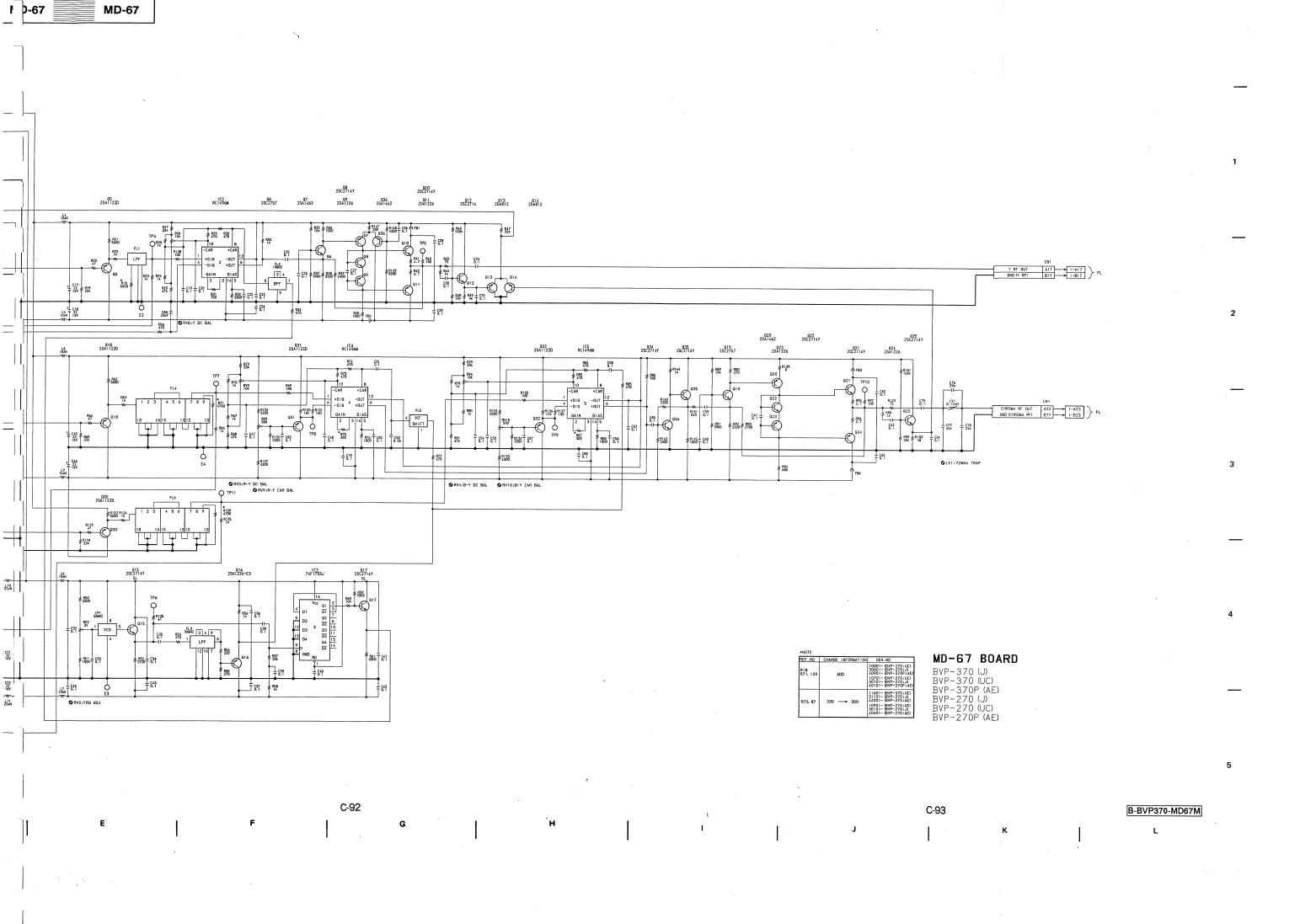
C-89 (b)

C-90 (b)

BVP-370/P

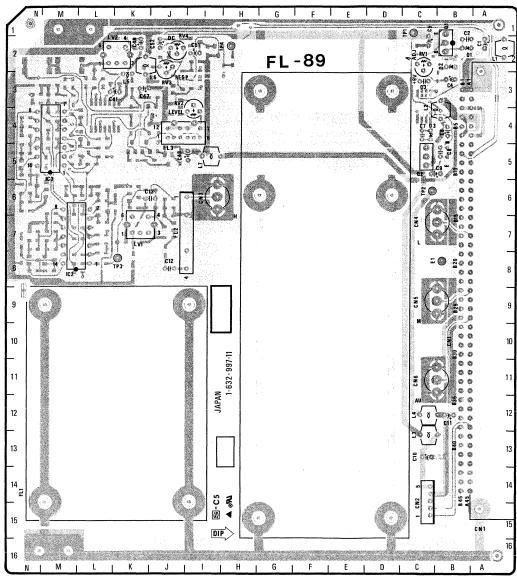


BVP-370/P BVP-270/P C-92

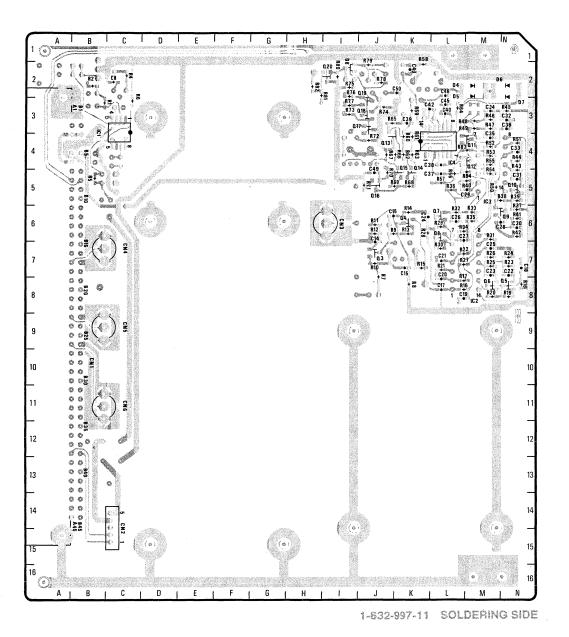


FL-89 BOARD

Serial No. 10001 - 11400 (UC) 30001 - (J) 40001 - (AE)



1-632-997-11 COMPONENT SIDE



FL-89 1-6 CN1 CN2 CN3 CN4 CN5 CN6 D1 D2 D3 D4 D5 D6 D7 D8 E1 FL1 FL2 FL3 IC1 IC2 IC3 IC4 LV1 LV2 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 RV2 TP2 TP3 TP4

FL-89 1-

CN1 CN2 CN3 CN4 CN5 CN6

D1 D2 D3 D4 D5 D6 D7 D8

E1 FL1 FL2 FL3

IC1 IC2 IC3 IC4

LV1 LV2

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17

Q18 Q19

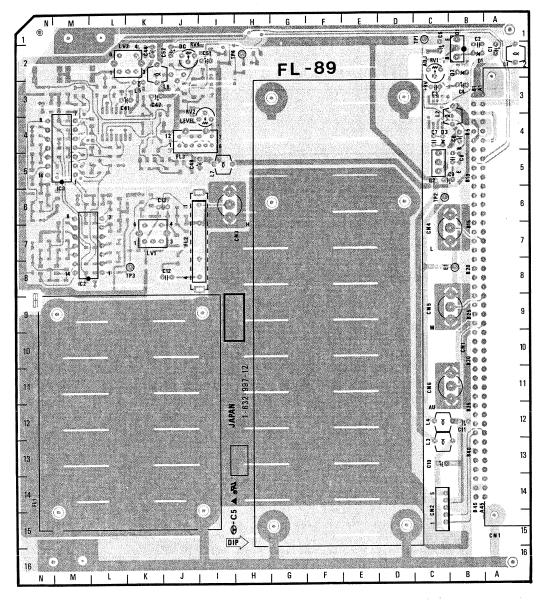
Q20 Q21

RV1 RV2 RV4

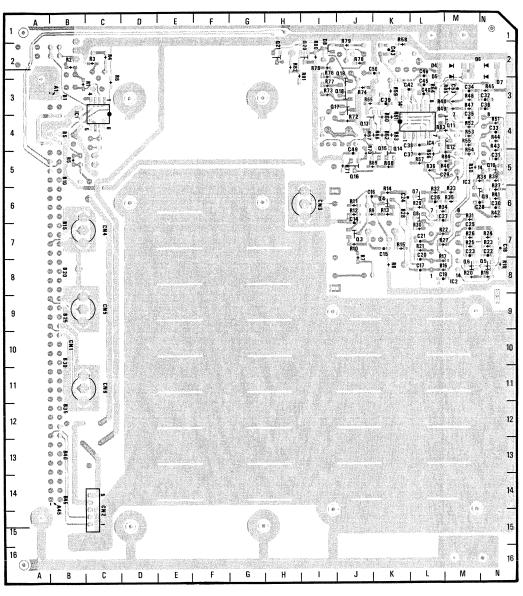
TP1 TP2 TP3 TP4

FL-89 BOARD

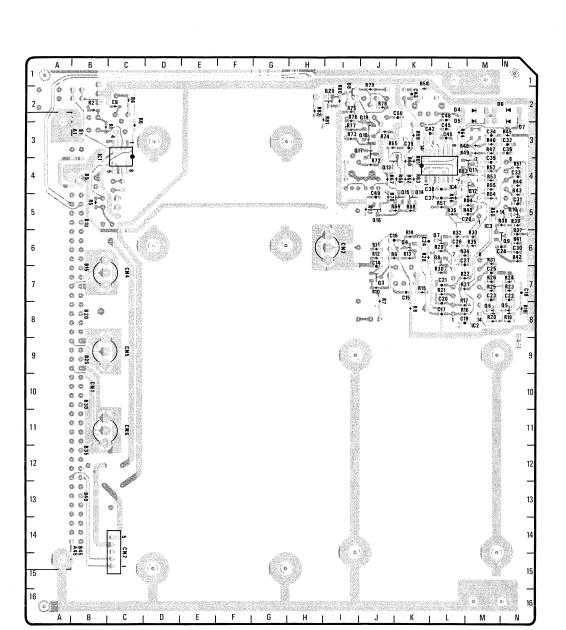
Serial No. 11401 - (UC)



1-632-997-12 COMPONENT SIDE



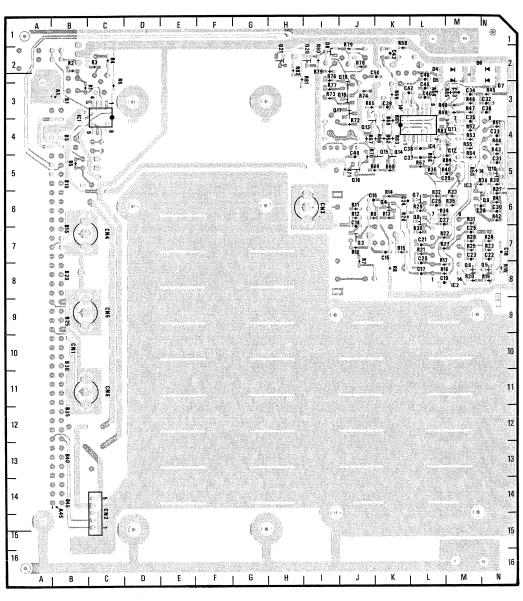
1-632-997-12 SOLDERING SIDE



1-632-997-11 SOLDERING SIDE

 FL-89	1-632-997-11
CN1	B-10
CN2	C-14
CN3	I-6
CN4	C-7
CN5	C-9
CN6	C-11
D1	B-2
D2	B-2
D3	C-4
D4	L-2
D5	L-2
D6	M-2
D7	N-3
D8	I-2
E1	C-8
FL1	N-14
FL2	J-7
FL3	J-5
IC1	B-3
IC2	M-8
IC3	M-5
IC4	L-4
LV1	K−7
LV2	K−2
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20	B-1 C-5 J-7 K-6 N-8 M-8 L-6 N-6 N-5 M-4 M-4 J-4 K-4 K-4 J-5 J-3 J-3 J-2 I-2
RV1	C-2
RV2	J-3
RV4	J-2
TP1	C-1
TP2	C-6
TP3	K-8
TP4	H-2

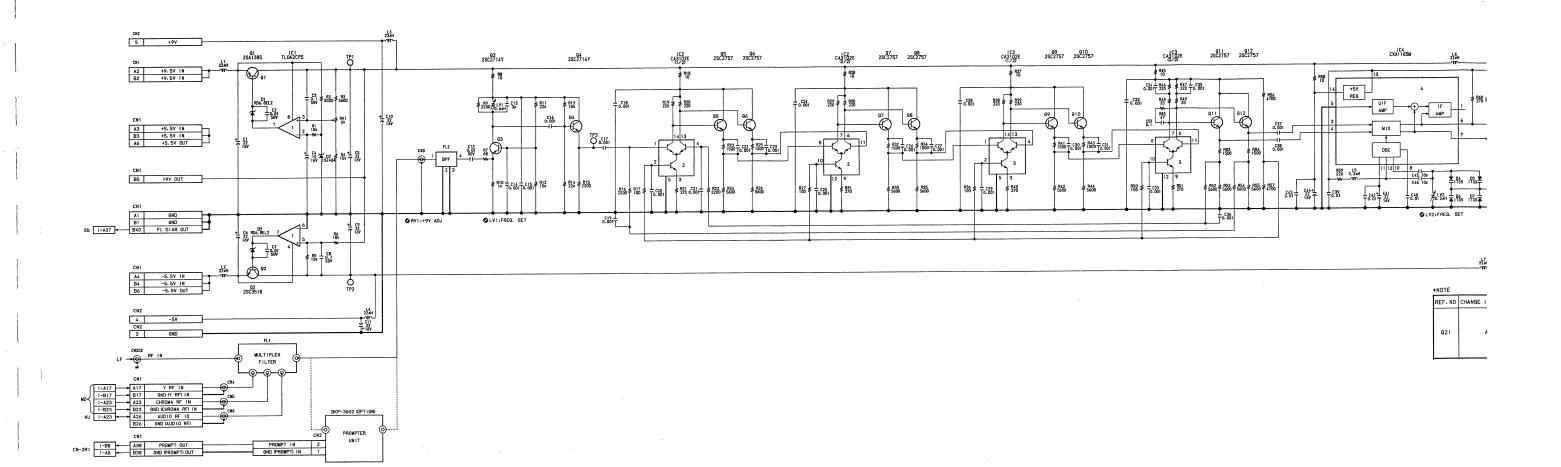
FL-89



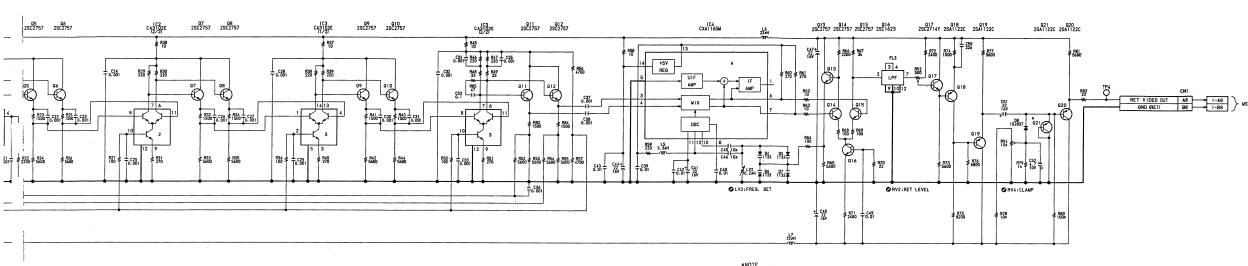
1-632-997-12 SOLDERING SIDE

FL-89	1-632-997-12
CN1	B-10
CN2	C-14
CN3	I-6
CN4	C-7
CN5	C-9
CN6	C-11
D1 D2 D3 D4 D5 D6 D7	B-2 B-2 C-4 L-2 L-2 M-2 N-3 I-2
E1	C-8
FL1	N-14
FL2	J-7
FL3	J-5
IC1	B-3
IC2	M-8
IC3	M-5
IC4	L-4
LV1	K-7
LV2	K-2
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21	B-1 C-5 J-7 K-8 M-8 L-6 N-5 N-4 M-4 J-4 K-4 J-3 J-3 J-3 J-2 I-2
RV1	C-2
RV2	J-3
RV4	J-2
TP1	C-1
TP2	C-6
TP3	K-8
TP4	H-2

FL-89 BOARD



C-97



SER. NO 11401- (BVP-370; UC) 30901- (BVP-370; J) 41601- (BVP-370P; AE) 10901- (BVP-270; UC) 30101- (BVP-270; J) 40401- (BVP-270P; AE)

FL-89 BOARD

BVP-370 (J) BVP-370 (UC) BVP-370P (AE) BVP-270 (J) BVP-270 (UC) BVP-270P (AE)

C-98

C-99

B-BVP370-FL89M

AU-129/1

CF2

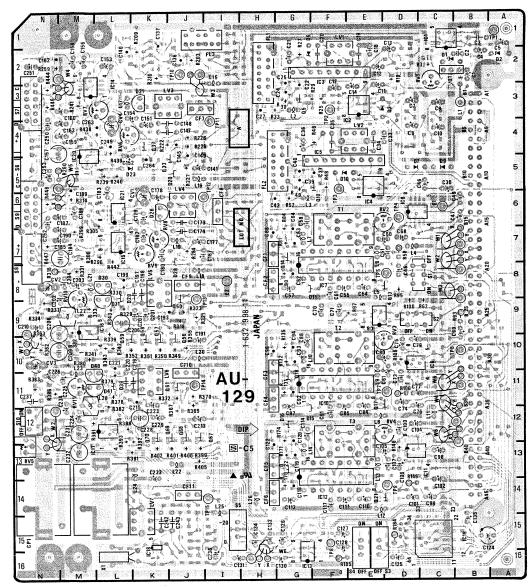
CF2 CF3 CF4 CF5 CF6 CF7 CF8

CF10 CF11 CN1 CP1

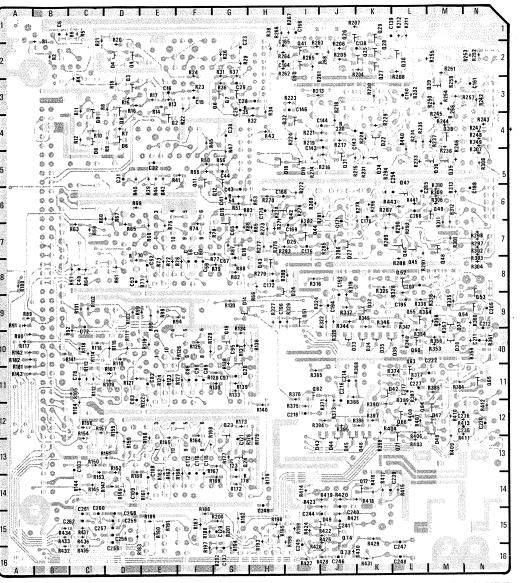
AU-129/129P BOARD

Serial No. 10001 - 10210 (ÚC)

30001 - 30205 (J) 40001 - 40210 (AE)



1-632-998-11 COMPONENT SIDE



1-632-998-11 SOLDERING SIDE

D2 D3 D4 D5 D6 D7 D8 D20 D21 D22 D23 D24 D25 D26 D27 D28 D29 D30 D37 D38 D39 D40 D40 D41 D42 D43 D44 D45 D47 D49 E1 E2 FL1 FL2 FL3

AU-129/12

CF1 CF2

CF3 CF4 CF5

CF11 CN1 CP1

D10 D11 D14 D15 D16 D18 D19 D20

D26 D27 D28 D29 D30 D31 D32 D33 D34 D35 D36

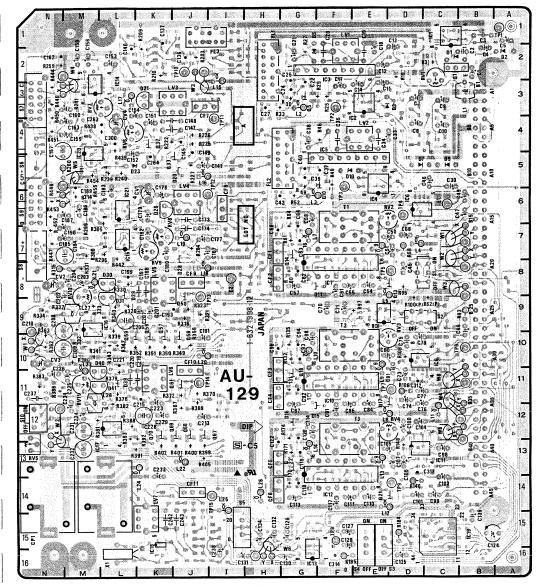
D38 D39 D40

D45 D46 D47 D48 D49

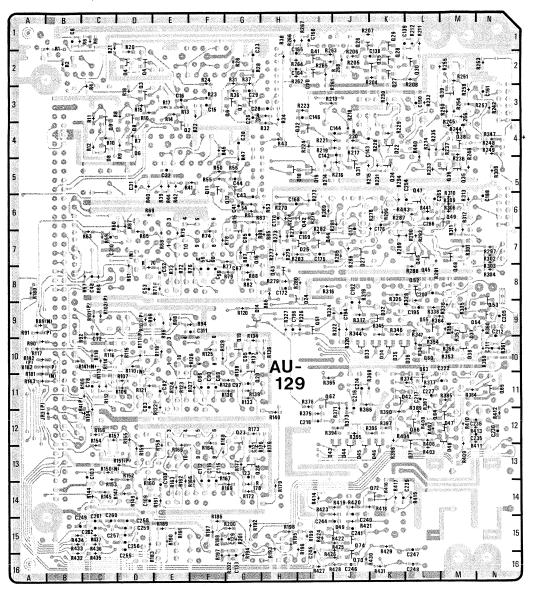
E2 FL1 FL2

AU-129/129P BOARD

Serial No. 10501 - 10800 (UC) 30401 - 30600 (J) 40501 - 40900 (AE)



1-632-998-12 COMPONENT SIDE



1-632-998-12 SOLDERING SIDE

AU-129/

CF1 CF2 CF3 CF4 CF5 CF6 CF7 CF8

CF9 CF10

CN1

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D19

D19 D20 D21 D22 D23 D24 D25

D26 D27

> D36 D37

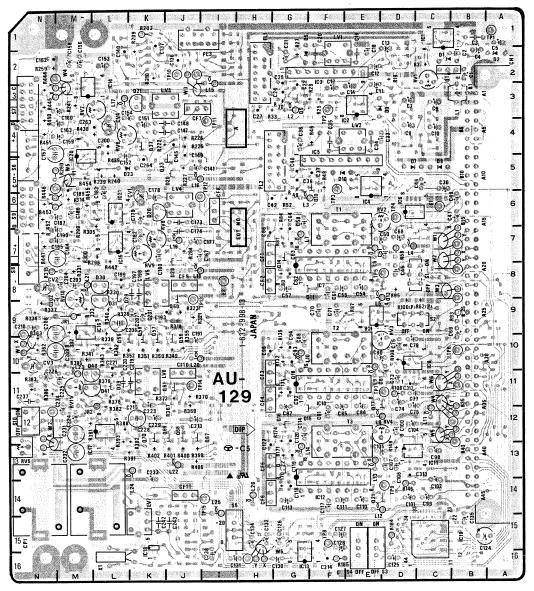
D38

D39 D40 D41 D42

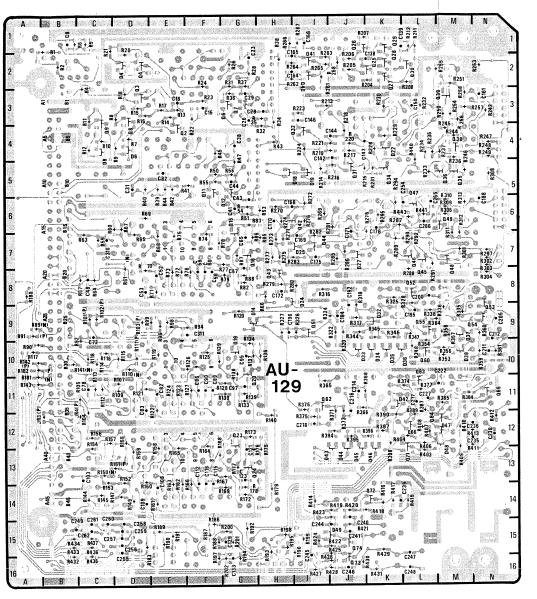
FL1 FL2 FL3

AU-129/129P BOARD

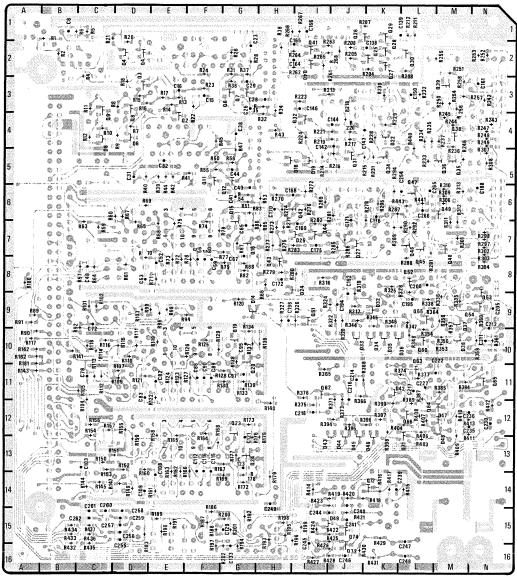
Serial No. 10801 - (UC) 30601 - (J) 40901 - (AE)



1-632-998-13 COMPONENT SIDE

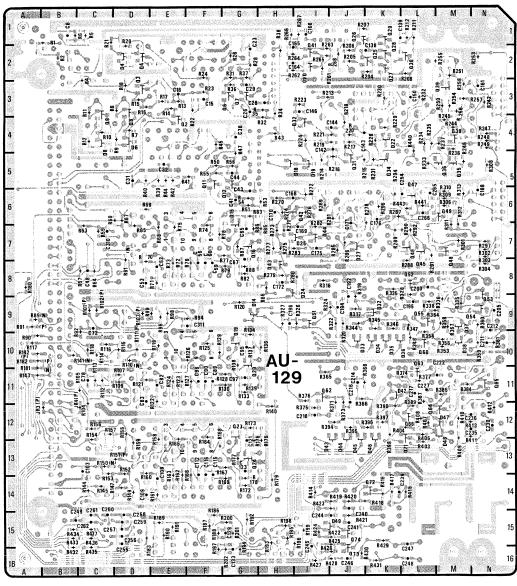


1-632-998-13 SOLDERING SIDE



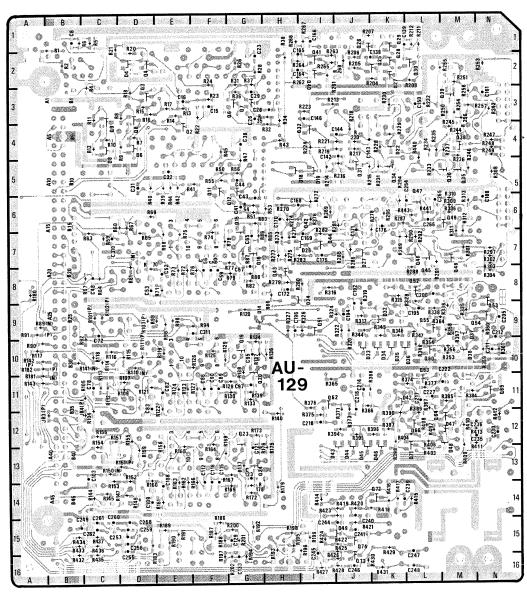
1-632-998-11 SOLDERING SIDE

AU-129	9/129P 1-	-632-998-11	- -				
CF1 CF2 CF3 CF4 CF5 CF6 CF7 CF8 CF9 CF10 CF11	H-7 H-8 H-11 H-11 H-13 H-14 J-3 I-6 J-8 J-10 J-13	IC1 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13	C-1 F-4 F-2 E-6 F-4 D-6 F-8 E-9 C-10 F-11 C-13 F-14 G-16 L-2	Q42 Q44 Q45 Q46 Q47 Q48 Q49 Q50 Q51 Q52 Q53 Q54 Q55 Q56	I-6 I-7 L-8 L-7 L-5 M-8 M-6 J-9 I-9 L-8 N-9 L-9 J-10	TP15 T1 T2 T3 X1	I-14 F-6 F-9 E-12 L-16
D1 D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D14 D15 D16 D18 D19 D20 D21 D22 D23 D24 D25 D26 D27 D28 D29 D30 D31 D32 D33 D34 D35 D36 D37 D38 D39 D40 D41 D42 D43 D44 D45 D46 D47 D48 D49 E1 E2 FL1 FL2 FL3	N-15 N-2232145589212 N-15-553458767888899000000000000000000000000000000	LV1 LV2 LV3 LV4 LV5 LV6 LV7 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q19 Q20 Q21 Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q20 Q21 Q21 Q20 Q21 Q21 Q20 Q21 Q21 Q20 Q20 Q21 Q20 Q20 Q21 Q20 Q20 Q20 Q20 Q20 Q20 Q20 Q20 Q20 Q20	LLMKBML FEJJKKK CEDDGGGDCFFGDGGGEGGEGGKJKKLJKKMMKM-1-2793555	Q57 Q58 Q59 Q60 Q61 Q62 Q63 Q64 Q65 Q66 Q67 Q71 Q71 Q72 Q73 Q74 RV1 RV2 RV3 RV4 RV5 RV7 RV8 RV10 RV11 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 TP1 TP1 TP1 TP1 TP1 TP1 TP1 TP1 TP1 TP1	S-9 10 10 10 10 10 10 10 10 10 10		



1-632-998-12 SOLDERING SIDE

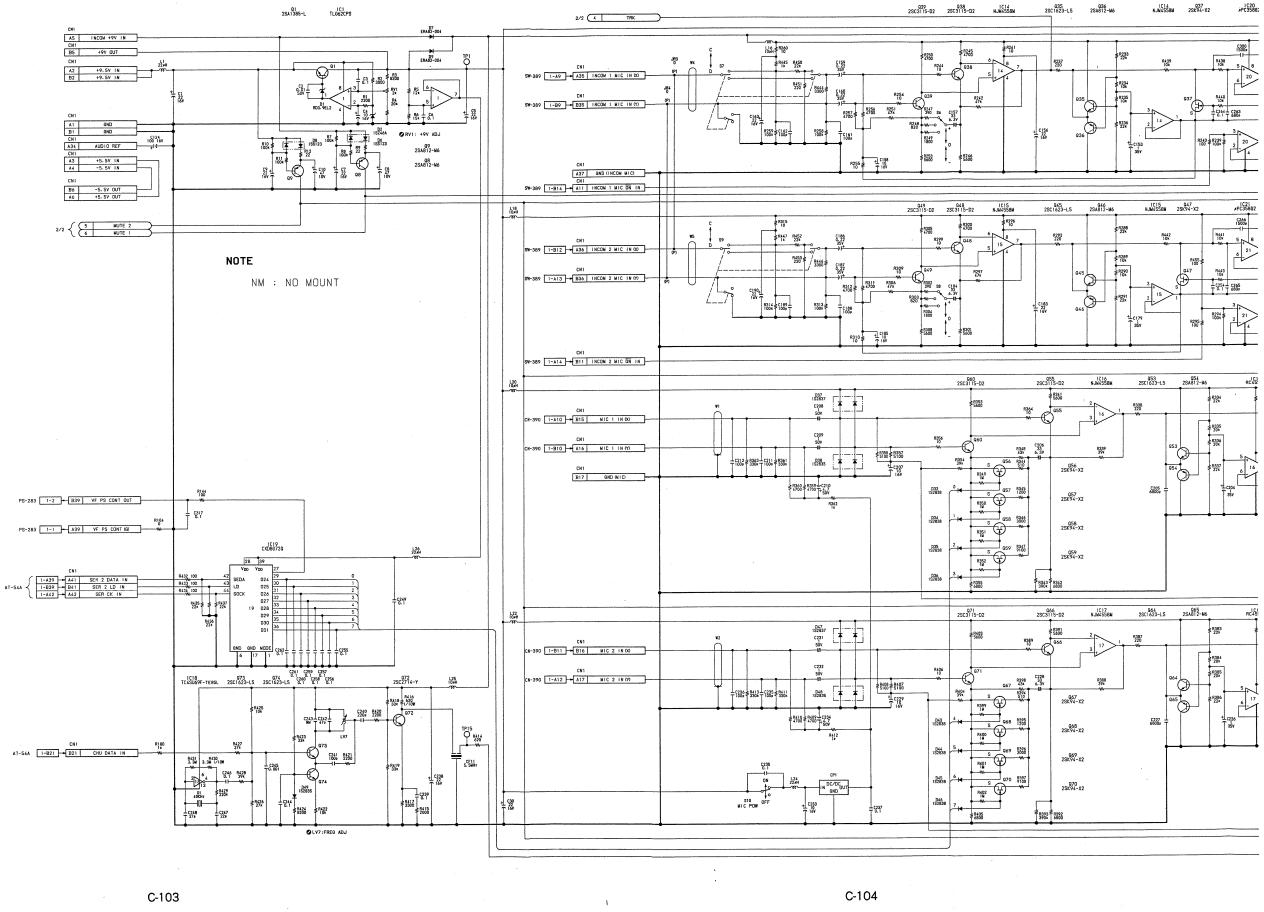
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CF1 CF2 CF3 CF4 CF5 CF6 CF7 CF8 CF9 CF10 CF11	H-7 H-8 H-11 H-13 H-14 J-3 I-6 J-8 J-10 J-13	IC1 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13 IC14	C-1 F-4 F-2 E-6 F-4 D-6 F-8 E-9 C-10 F-11 C-13 F-14 G-16 L-2	Q42 Q44 Q45 Q46 Q47 Q48 Q49 Q50 Q51 Q52 Q53 Q54 Q55 Q56	I-6 I-7 L-8 L-7 L-5 M-8 M-6 J-9 I-9 L-8 N-9 N-9	TP15 T1 T2 T3 X1	I-14 F-6 F-9 E-12 L-16
CP1	N-15	IC15 IC16	L-7 L-9	Q57 Q58	K-9 K-9		
D1 D2 D3 D4 D5 D6 D7 D8 D11 D118 D19 D20 D21 D223 D224 D226 D30 D32 D33 D33 D33 D33 D33 D33 D33 D44 D44 D44	C-2 A-2 D-2 D-2 D-4 D-5 D-5 D-5 D-6 F-8 G-12 I-5 I-5 I-5 I-5 I-5 I-5 I-7 I-8 I-9 I-10 I-11 I-11 I-11 I-11 I-11 I-11 I-11	LC16 IC17 IC18 IC19 IC20 IC21 LV1 LV2 LV3 LV4 LV5 LV6 LV7 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 G22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q33 Q34 Q35 Q36 Q37 Q38 Q39 Q40 Q41	L-913555 MK-114 K-114 K-15-146 14-3-5-8-1-14 FEJJKKK CEDDGGGDCFFGDGGGEGGGKJKKKLJKKMM-3-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	Q59 Q59 Q60 Q61 Q62 Q63 Q64 Q65 Q66 Q67 Q68 Q69 Q70 Q71 Q72 Q73 Q74 RV1 RV2 RV4 RV5 RV1 RV1 S1 S2 S3 S4 S5 S6 S7 TP1 TP1 TP1 TP1 TP1 TP1 TP1 TP1 TP1 TP1	K-9 L-10 L-11 L-11 L-11 N-11 L-12 L-13 K-14 L-13 L-14 L-13 L-14 L-13 L-14 L-14 L-15 N-16 L-17 L-18 L-19 L-19 L-19 L-19 L-19 L-19 L-19 L-19		



1-632-998-13 SOLDERING SIDE

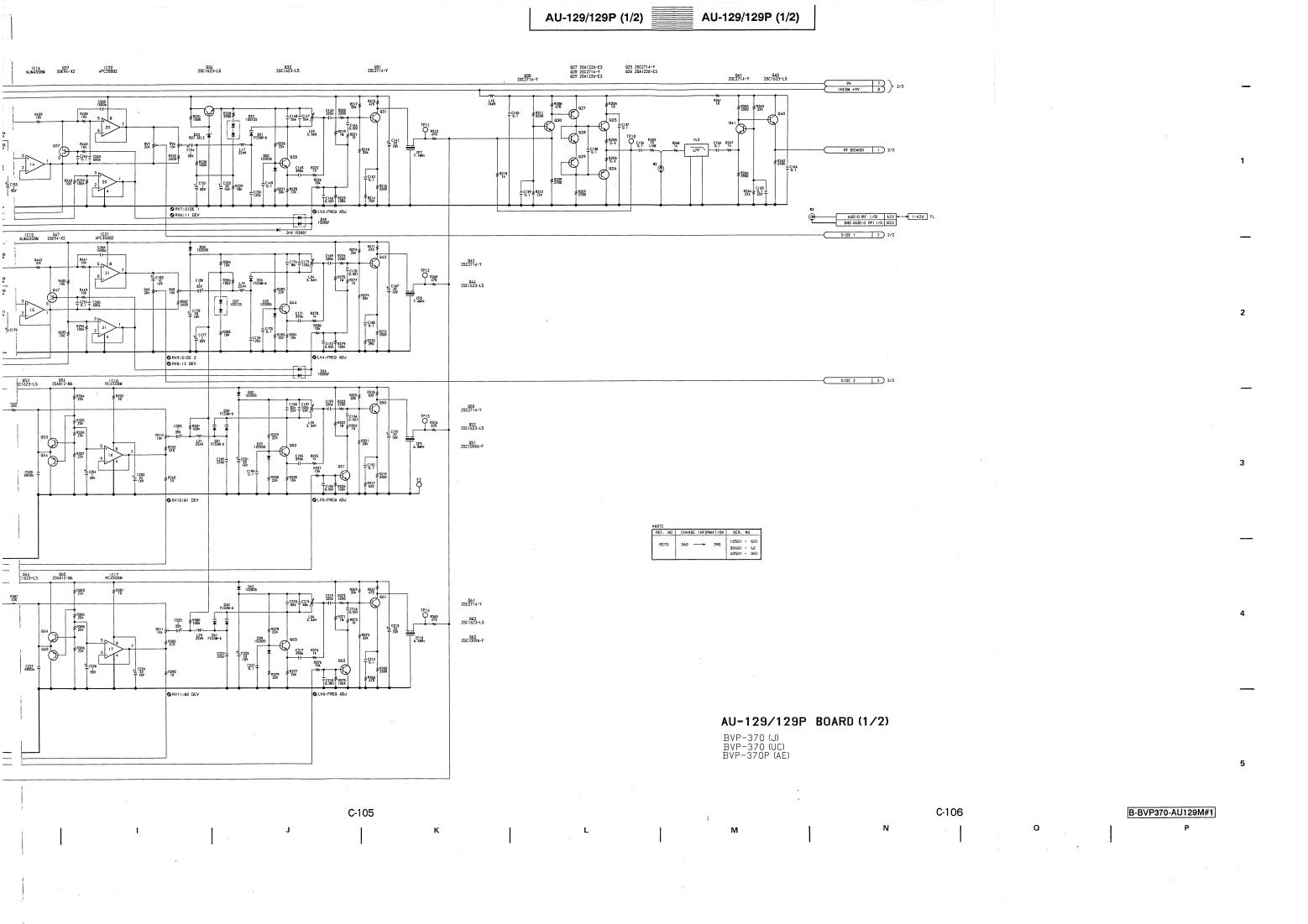
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AU-129/ CF1 CF2 CF3 CF4 CF5 CF6 CF7 CF7 CF9 CF10 CF1 CN1 CP1 D12 D3 D4 D5 D6 D7 D8 D9 D10 D11 D14 D15 D20 D21 D22 D23 D34 D35 D37 D38 D39 D30 D31 D32 D33 D34 D35 D37 D38 D37 D38 D37 D38 D37 D38 D37 D38 D37 D38 D37 D38 D37 D38 D37 D38 D37 D38 D37 D38 D37 D37 D38 D37 D38 D37 D37 D38 D37 D37 D38 D37 D37 D38 D37 D37 D38 D37 D37 D38 D37 D37 D38 D37 D37 D37 D37 D37 D37 D37 D37	129P 1-632 H-78 1113 H-113 H-114 J-68 11 J-14 15 C-232145458922 H-78 1113 J-10	P-998-13 P-9	CEFEF-046890113466 CEFEF-06890113466 CEFEF-06890113466 CEFEF-06890113466 CEFEF-07890113466 CEFEF-0890113466 CEFEF-0890113466 CEFEF-08900113466	Q41 Q42 Q44 Q45 Q46 Q45 Q45 Q55 Q55 Q55 Q55 Q55 Q55 Q55 Q55	IJJL-75869989900000000000000000000000000000000	TP13 TP14 TP15 T1 T2 T3 X1	I-9 J-11 I-14 F-6 F-9 E-12 L-16
D49 E1 E2	J-15 B-6 I-8	Q33 Q34 Q35 Q36	K-5 K-5 M-5 M-5	TP5 TP6 TP7 TP8	E-8 B-10 E-11 F-15		
FL1 FL2 FL3	H-1 H-5 I-2	Q37 Q38 Q39 Q40	K-4 M-4 M-3 I-2	TP9 TP10 TP11 TP12	D-14 J-2 I-4 I-5		





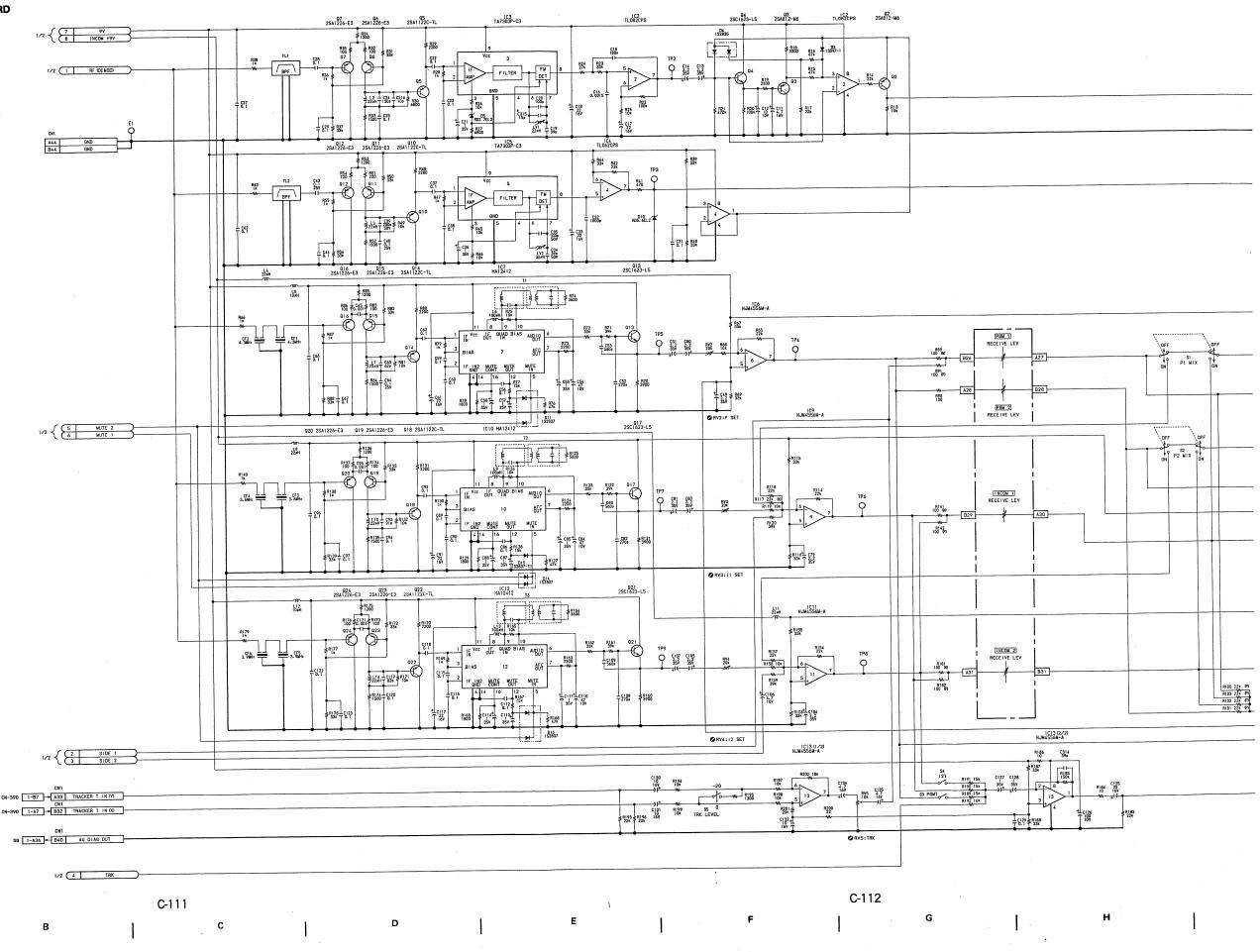
BVP-370/P C-103

A B C D E F G H



AU-129/129P (2/2) BOARD

BVP-370/P

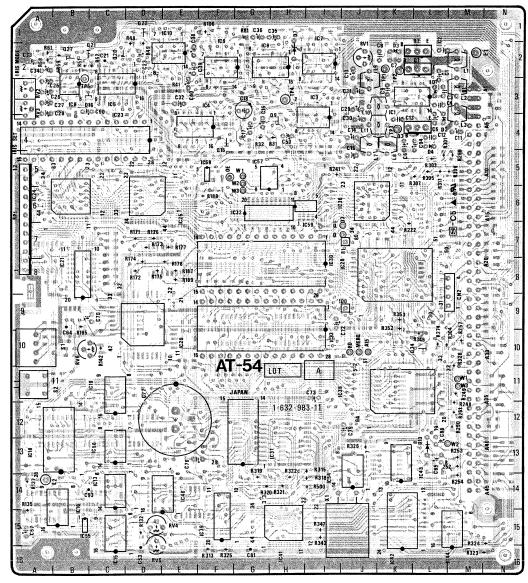


AT-54

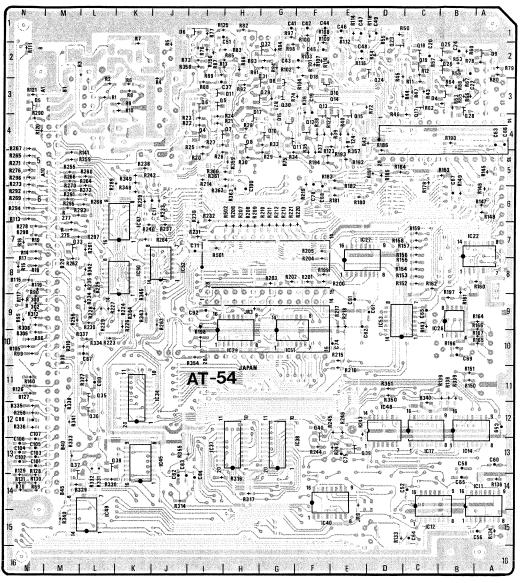
AT-54 1-

AT-54 BOARD

Serial No. 10301 – 10500 (UC) 30301 – 30400 (J) 40301 – 40600 (AE)



1-632-983-11 COMPONENT SIDE



1-632-983-11 SOLDERING SIDE

IC23 IC24 IC25 IC26 IC27 IC28 IC29 IC30 IC31 IC32 IC33 IC34 IC35 IC36 IC37 IC38 IC39 IC40 IC41 IC42 IC42 IC44

AT-54 1

CNI30 CNI33

CN1 CN2

D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D13

D14 D15 D16 D17 D18

E1 E2

IC1 IC3 IC4 IC5 IC6 IC7 IC8 IC9

IC10 IC11 IC12 IC13 IC14 IC15 IC16 IC17 IC18 IC19 IC20 IC21

IC23 IC24 IC25

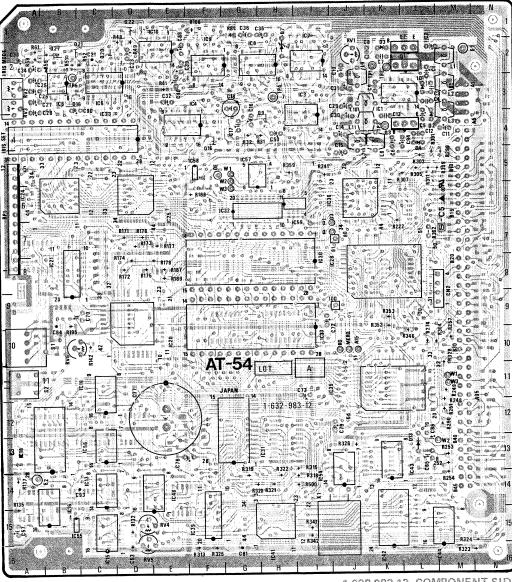
IC26 IC27

IC28 IC29 IC30 IC31 IC32 IC33

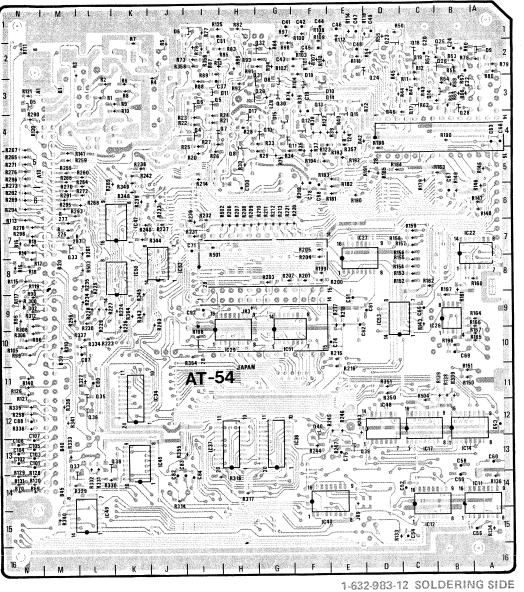
IC34 IC35 IC37 IC38 IC39 IC40

IC41 IC42 IC43 IC44

Serial No. 10301 - 10800 (UC) 30301 - 30600 (J) 40301 - 40900 (AE)

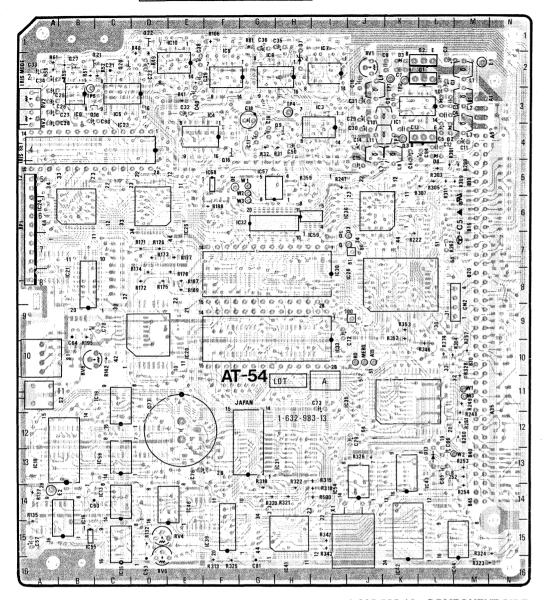




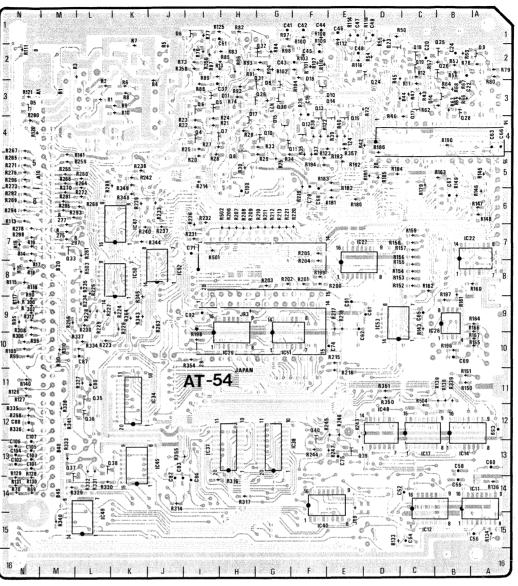


AT-54 BOARD

Serial No. 10801 – (UC) 30601 – (J) 40901 – (AE)



1-632-983-13 COMPONENT SIDE



1-632-983-13 SOLDERING SIDE

AT-54 1-

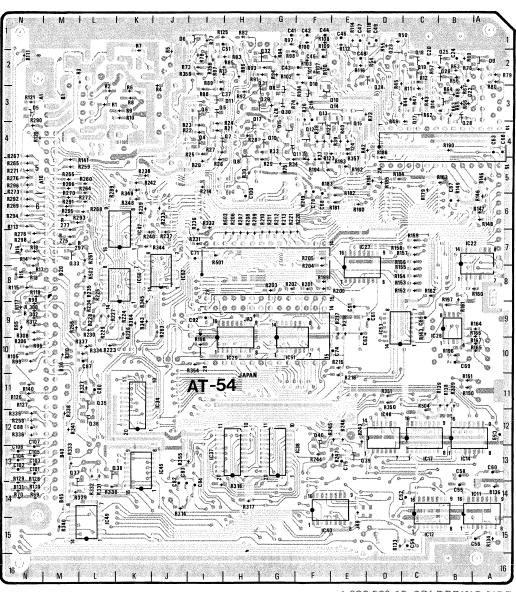
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IC25 IC26

1-632-983-11 SOLDERING SIDE

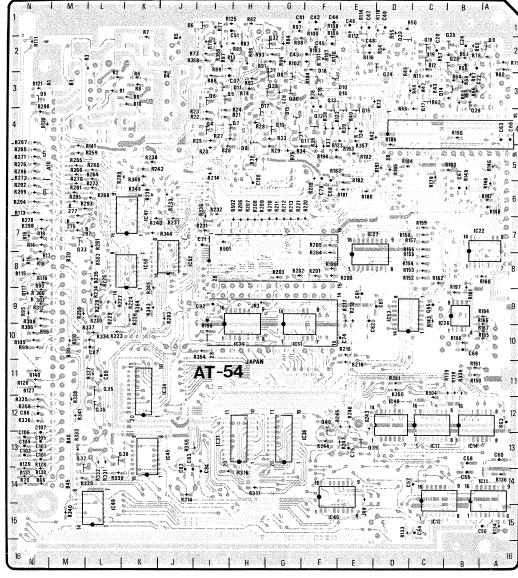
AT-54	1-632-98	3-11 			
CNI30 CNI33 CNI	I-8 I-10 M-7	IC45 IC46 IC47 IC48	J-13 E-14 K-6 D-12	TP3 TP4 TP5	K-4 H-3 B-3
CN2 D1 D2	M-9 L-3 L-4	IC49 IC50 IC51 IC52	L-15 K-8 G-10 J-8	X1	I-14
D3 D4 D5 D6 D7	K-2 L-5 N-3 J-1 H-1	IC53 IC54 IC55 IC56 IC57	D-9 I-14 B-15 C-13 G-5		
D8 D9 D10 D11	G-3 A-2 E-3 H-3	IC58 IC59 Q1	F-5 I-7 L-2		
D13 D14 D15 D16 D17 D18	L-13 C-3 G-4 B-3 H-3 F-2	Q2 Q3 Q4 Q5 Q6 Q7	L-1 K-4 I-4 I-3 I-3		
E1 E2	N-2 B-14	Q8 Q9 Q10 Q11	H-4 H-4 G-4 F-4		
IC1 IC3 IC4 IC5 IC6 IC7	K-3 I-3 F-3 C-3 B-3	Q12 Q13 Q14 Q15 Q16 Q17	F-4 F-3 E-3 E-4 F-5 C-3		
IC8 IC9 IC10 IC11 IC12	I-1 G-2 F-2 E-1 A-14 C-15	Q18 Q19 Q20 Q21 Q22	C-2 C-2 C-2 C-2 D-1		
IC13 IC14 IC15 IC16 IC17	C-14 B-13 C-16 B-14 C-13	Q23 Q24 Q25 Q26 Q27	D-1 D-3 B-2 B-2 B-2		
IC18 IC19 IC20 IC21 IC22 IC23	A-13 C-11 E-10 B-8 B-7 C-3	Q28 Q29 Q30 Q31 Q32 Q33	B-4 G-3 G-3 G-2 G-2 M-7		
IC24 IC25 IC26 IC27 IC28 IC29	A-6 E-6 B-10 E-7 J-8 H-10	Q35 Q36 Q37 Q38 Q39 Q40	L-11 L-12 M-13 K-13 E-13 F-12		
IC30 IC31	I-8 H-13	RP1	A-6		
IC32 IC33 IC34 IC35 IC36 IC37 IC38	G-6 I-10 K-11 J-11 I-6 I-13 F-13	RV1 RV2 RV3 RV4 RV5 RV6	J-2 A-3 A-3 E-15 D-16 B-10		
IC39 IC40 IC41	F-15 F-15 H-16	S1 S2	B-10 B-11		
IC42 IC43 IC44	K-16 L-13 M-16	TP1 TP2	K-2 K-2		

AT-54 1-632-983-12



1-632-983-12 SOLDERING SIDE

A1-54					
CN130 CN133	I-8 I-10	ÌC45 IC46	J-13 E-14	TP3 TP4	K-4 H-3
CN1 CN2	B-10 M-9	IC47 IC48 IC49 IC50	K-7 D-12 L-15	TP5 X1	B-3 I-14
D1 D2	L-3 L-4	IC51 IC52	K-8 G-10 J-8		
D3 D4	K-2 L-5	IC53 IC54	D-9 I-14		
D5 D6	N-3 J-1	IC55 IC56	B-15 C-13		
D7	H-1	IC57	G-5		
D8 D9	G-3 A-2	IC58 IC59	F-5 I-7		
D10	E-3				
D11 D13	H-3 L-13	Q1 Q2	L-2 L-2		
D14 D15	C-3 G-4	Q3	K-4		
D16	C-3	Q4 Q5	I – 4 I – 3		
D17 D18	H-3 F-2	Q6 Q7	I –3 H–4		
		Q8	H-5		
E1 E2	N-2 B-14	Q9 Q10	H-4 G-4		
IC1	K-3	Q11 Q12	G-4 F-4		
IC3 IC4	I-3	Q13	F-3		
IC5	F-3 C-3	Q14 Q15	E-3 E-4		
IC6 IC7	B-3 I-1	Q16 Q17	F-5 C-3		
IC8	G-2	Q18	C-2		
IC9 IC10	F-2 E-1	Q19 Q20	C-2 C-2		
IC11 IC12	A-14 C-15	Q2 1 Q2 2	C-2 D-1		
IC13	C-14	Q23	D-1		
IC14 IC15	B-13 C-16	Q24 Q25	D-3 B-2		
IC16 IC17	B-14 C-13	Q26	B-2		
IC18	C-13 A-13	Q27 Q28	B-2 B-4		
IC19 IC20	C-11 E-10	Q29 Q30	G-3 G-3		
IC21	B-8	Q31	G-2		
IC22 IC23	B-7 C-4	Q32 Q33	G-2 M-7		
IC24 IC25	A-6 E-6	Q35 Q36	L-11 L-12		
IC26	B-9	Q37	M-13		
IC27 IC28	E-7 J-8	Q38 Q39	L-13 E-13		
IC29	H-10	Q40	F-12		
IC30 IC31	I-8 H-13	RP1	A-6		
IC32 IC33	G-6 I-10	RV1	J-2		
IC34	J-11	RV2	A-3		
IC35 IC36	I-11 J-6	RV3 RV4	A-3 E-15		
IC37 IC38	I-13 F-13	RV5 RV6	D-16 B-10		
IC39	F-15				
IC40 IC41	F-15 H-16	S1 S2	B-10 B-11		
IC42 IC43	K-16 L-13	TP1	K-3		
1043	L-13	TP9	N−3 K−3		

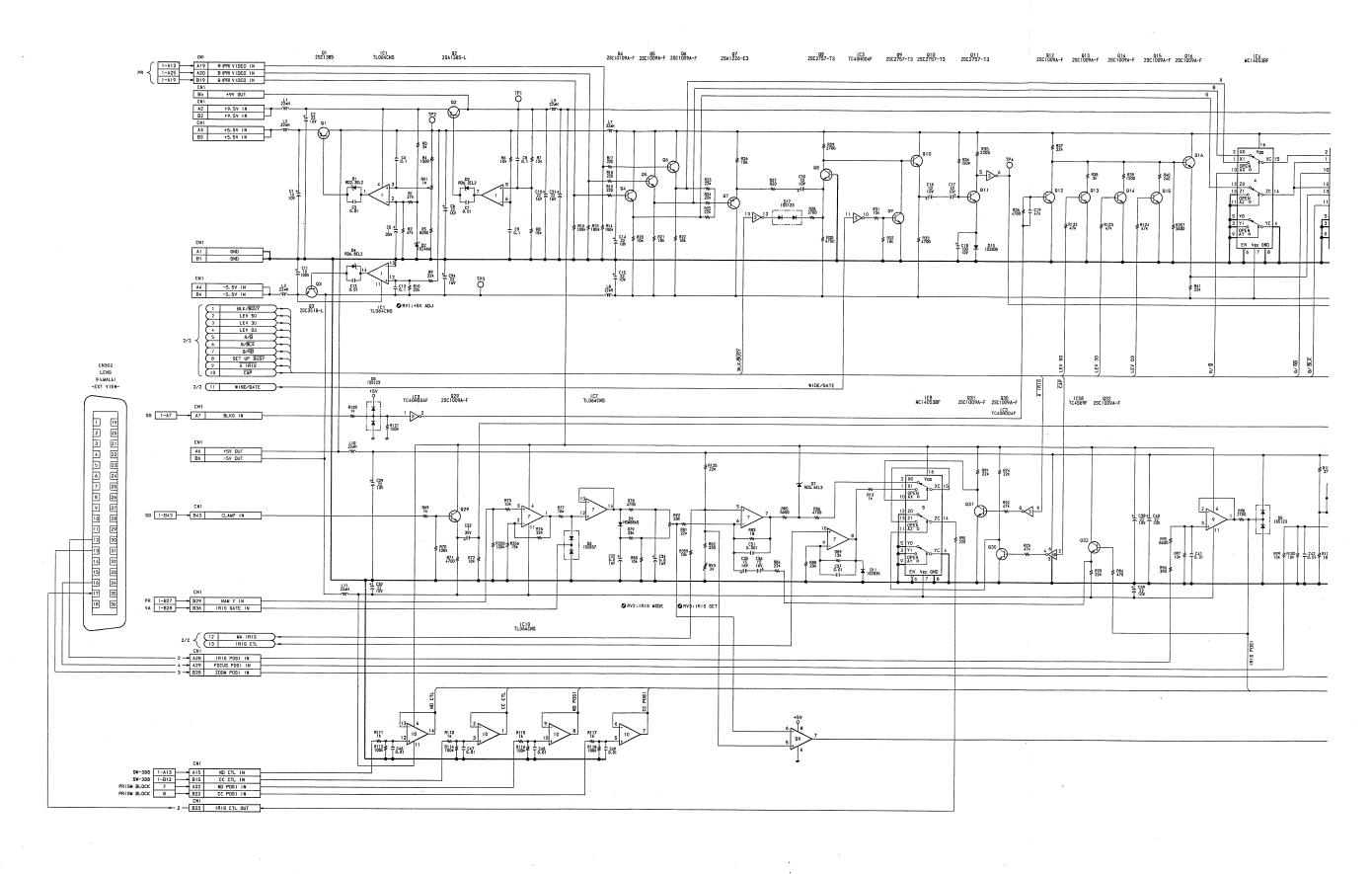


1-632-983-13 SOLDERING SIDE

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A	T-	5	4		1	_	6	3	2	_	9	8	3	_	1

AT-54

CNI30 CNI33	I-8 I-10	IC45 IC46 IC47	J-13 E-14 K-7	TP3 TP4 TP5	K-4 H-3 B-3
CN1 CN2	M-7 M-9	IC48 IC49 IC50	D-12 L-15 K-8	X1	I-14
D1 D2 D3	L-3 L-4 K-2	IC51 IC52 IC53	G-10 J-8 D-9		
D4 D5 D6	L-5 N-3 J-1	IC54 IC55 IC56	I-14 B-15 C-13		
D7 D8 D9	H-1 G-3 A-2	IC57 IC58 IC59	G-5 F-5 I-7		
D10 D11 D13	E-3 H-3 L-13	Q1 Q2	L-2 L-2		
D14 D15 D16	C-3 G-4 C-3	Q3 Q4 Q5	K-4 I-4 I-3		
D17 D18	H-3 F-2	Q6 Q7	I-3 H-4		
E1 E2	N-2 B-14	Q8 Q9 Q10 Q11	H-5 H-4 G-4 G-4		
IC1 IC3 IC4	K-3 I-3 F-3	Q12 Q13	F-4 F-3		
IC5 IC6	C-3 B-3	Q14 Q15 Q16	E-3 E-4 F-5		
IC7 IC8 IC9	I-1 G-2 F-2	Q17 Q18 Q19	C-3 C-2 C-2		
IC10 IC11 IC12	E-1 A-14 C-15	Q20 Q21 Q22	C-2 C-2 D-1		
IC13 IC14 IC15	C-14 B-13 C-16	Q23 Q24 Q25	D-1 D-3 B-2		
IC16 IC17 IC18	B-14 C-13 A-13	Q26 Q27 Q28	B-2 B-2 B-4		
IC19 IC20 IC21	C-11 E-10 B-8	Q29 Q30 Q31	G-3 G-3 G-2		
IC22 IC23 IC24	B-7 C-4 A-6	Q32 Q33 Q35	G-2 M-7 L-11		
IC25 IC26 IC27	E-6 B-9	Q36 Q37	L-12 M-13		
IC28 IC29	E-7 J-8 H-10	Q38 Q39 Q40	L-13 E-13 F-12		
IC30 IC31 IC32	I-8 H-13 G-6	RP1	A-6		
IC33 IC34 IC35	I-10 J-11 I-11	RV1 RV2 RV3	J-2 A-3 A-3		
IC36 IC37 IC38	J-6 I-13 F-13	RV4 RV5 RV6	E-15 D-16 B-10		
IC39 IC40 IC41	F-15 F-15 H-16	\$1 \$2	B-10 B-11		
IC42 IC43 IC44	K-16 L-13 L-16	TP1 TP2	K-3 K-3		
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BVP-370/P BVP-270/P C-117

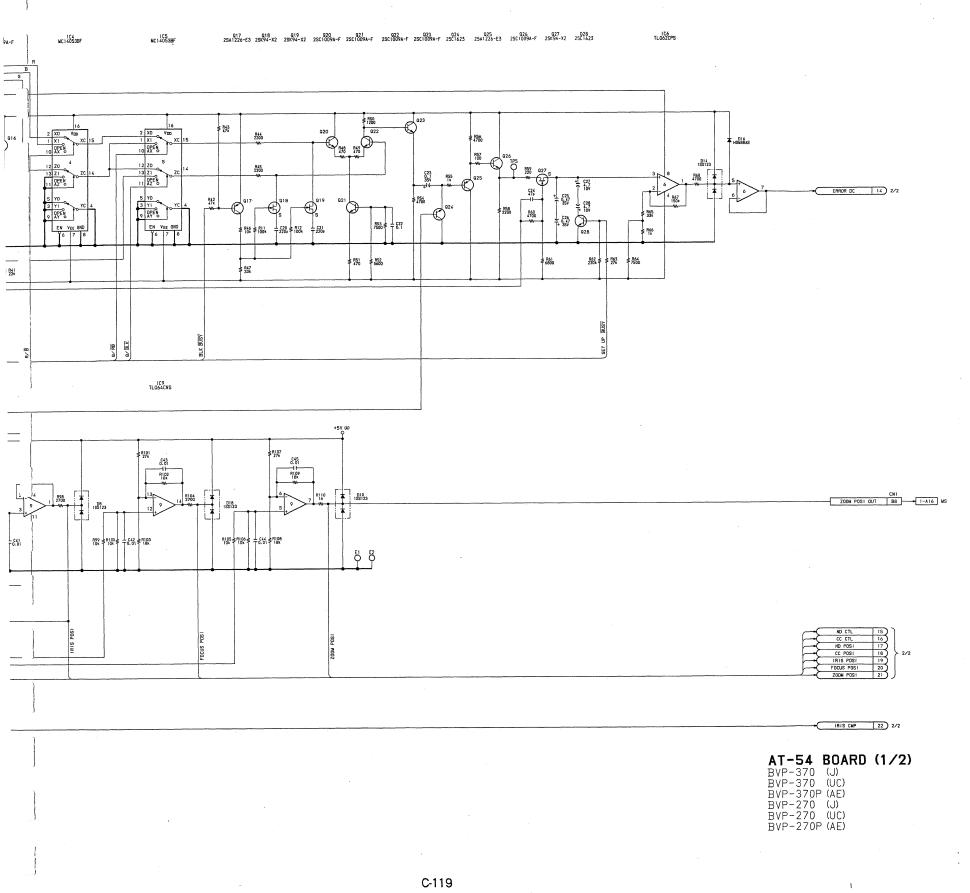
C-118

E

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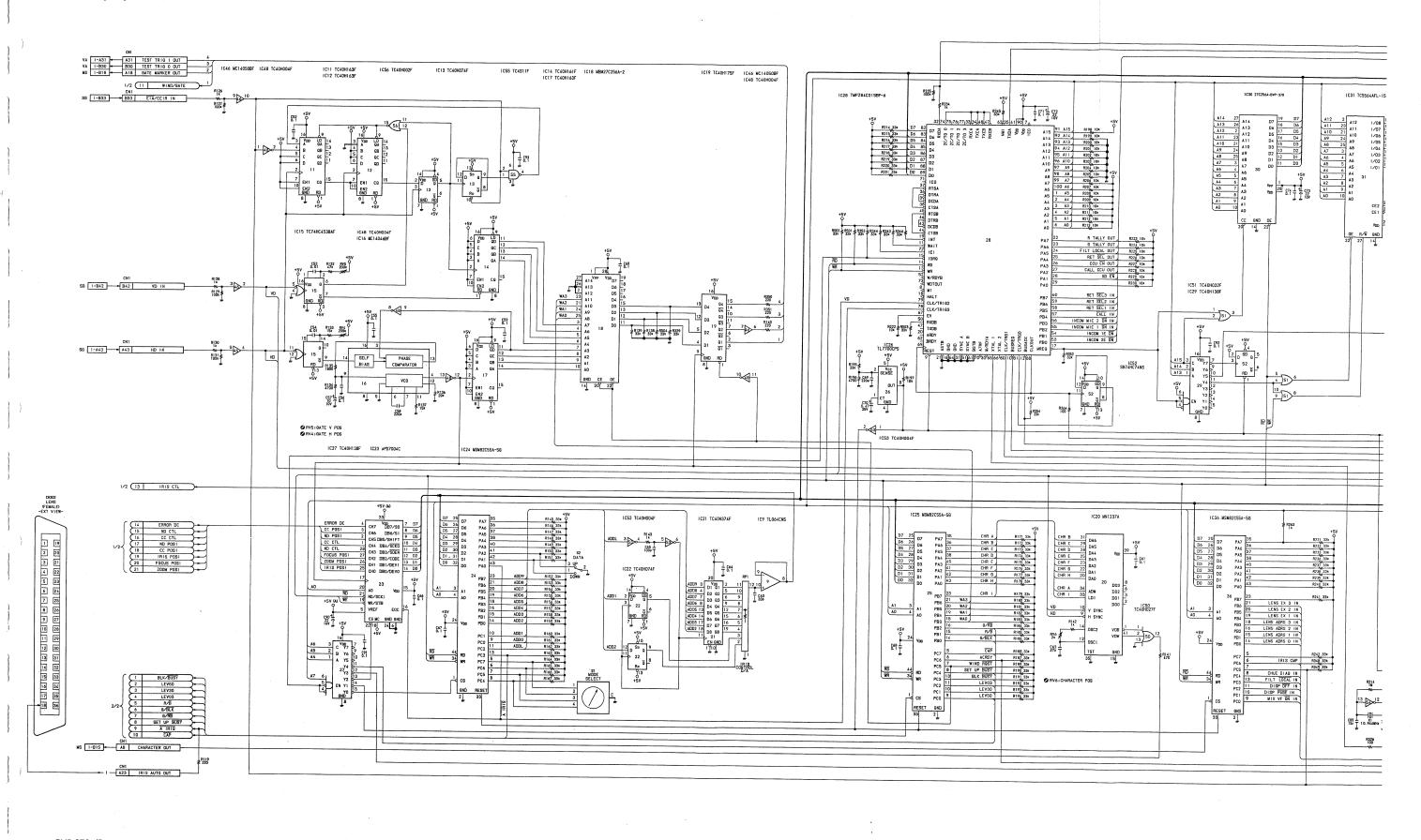
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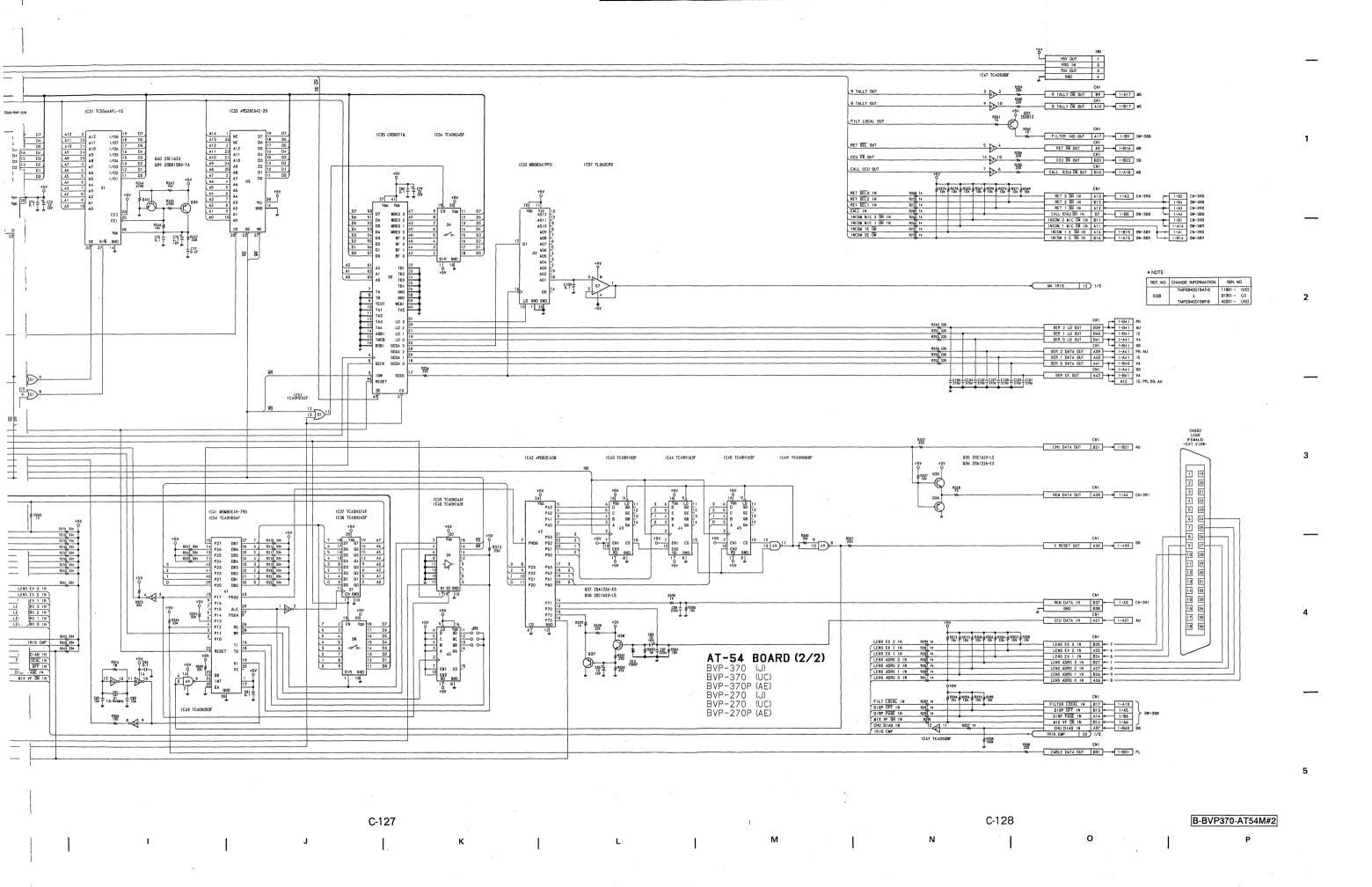


C-120

B-BVP370-AT54M#1



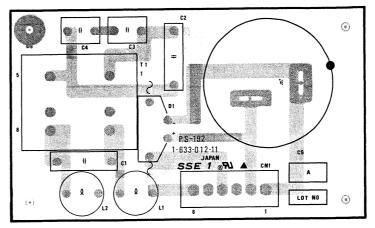
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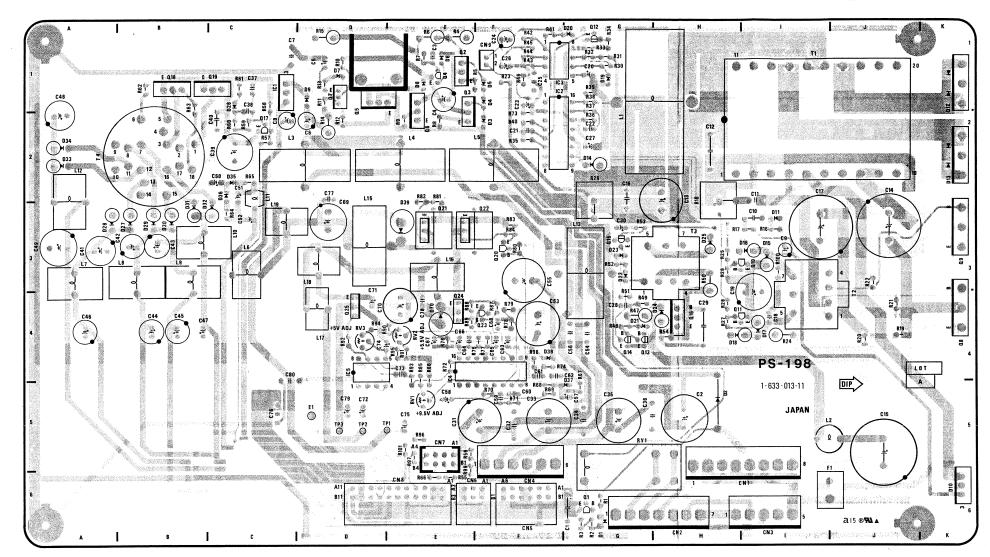
PS-192/198

PS-192 BOARD

Serial No. 10001 - 10600 (UC) 30001 - 30400 (J) 40001 - 40700 (AE)



1-633-012-11 COMPONENT SIDE

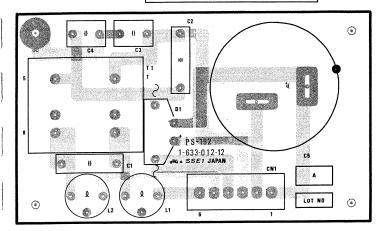


1-633-013-11 COMPONENT SIDE

PS-198	1-633-0	13-11	
CN1 CN2 CN3 CN4 CN5 CN6 CN7 CN8 CN9	I-6 H-5 I-6 F-5 E-5 E-5 E-5	Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19	I- G- G- G- H- C- B-
D1 D2 D3 D4 D5 D6	G-6 H-5 F-2 F-1 F-1	Q20 Q21 Q22 Q23 Q24 Q25	F- F- E- D-
D7 D8 D9 D10	D-1 E-1 D-1 K-6	RV1 RV2 RV3	E- D-
D11 D12 D13	I-3 K-1 K-2	RY1	G-
D14 D15 D16	G-2 I-3 I-3	TP1 TP2 TP3	D- D- D-
D17 D18 D19 D20 D20 D21 D22 D23 D24 D25 D26 D27 D28 D29 D30 D31 D32 D33 D34 D35 D34 D35 D37 D36 D37	I-4 H-4 G-1 G-1 G-3 G-3 H-4 H-3 C-1 B-3 B-3 B-3 B-3 B-3 C-2 C-2 G-5 F-4 E-3 E-4	T1 T2 T3 T4	I- J- H- A-
E1	D-5		
F1	J-6		
IC1 IC2 IC3 IC4 IC5	C-1 F-1 F-1 E-4 D-4		
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9	G-6 E-1 E-1 E-1 D-1 E-2 D-1 K-4		

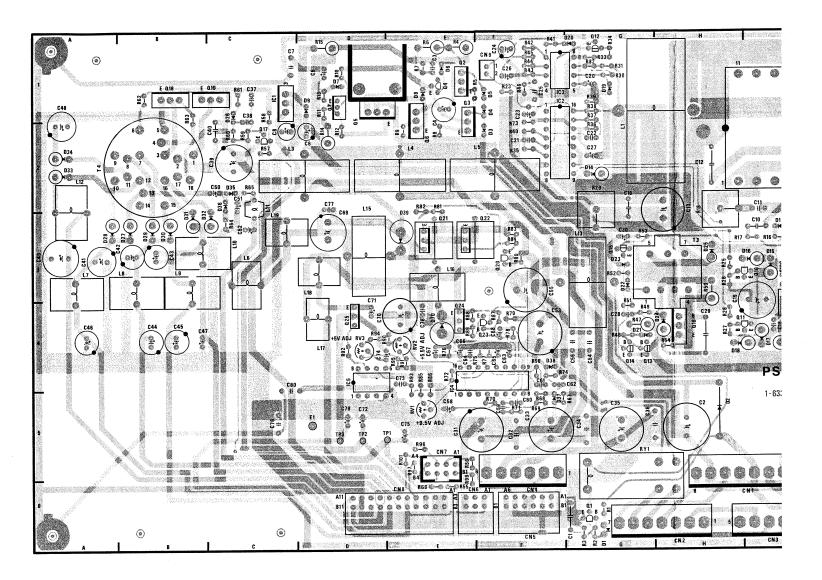
PS-192 BOARD

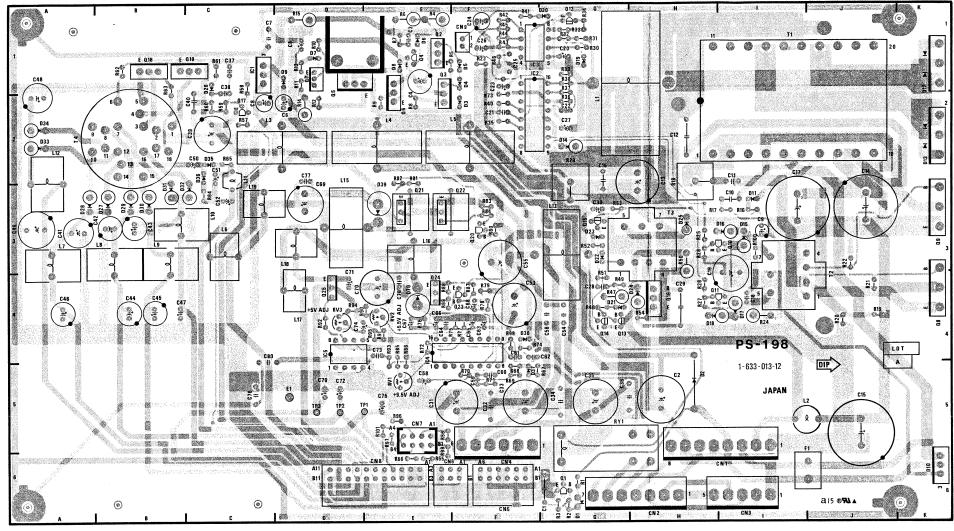
Serial	No.	10601	-	(UC)
		30401		(J)
		40701		(AE)



1-633-012-12 COMPONENT SIDE

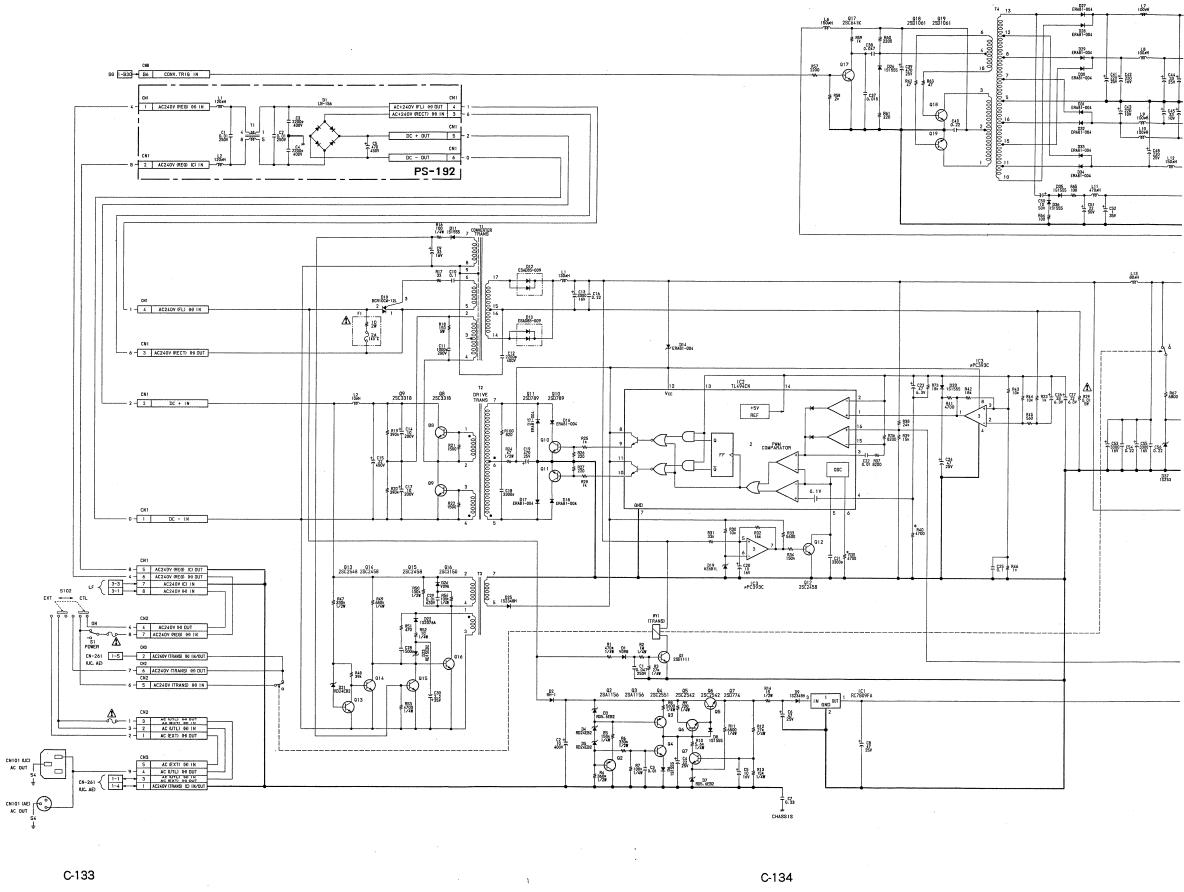
PS-198 BOARD



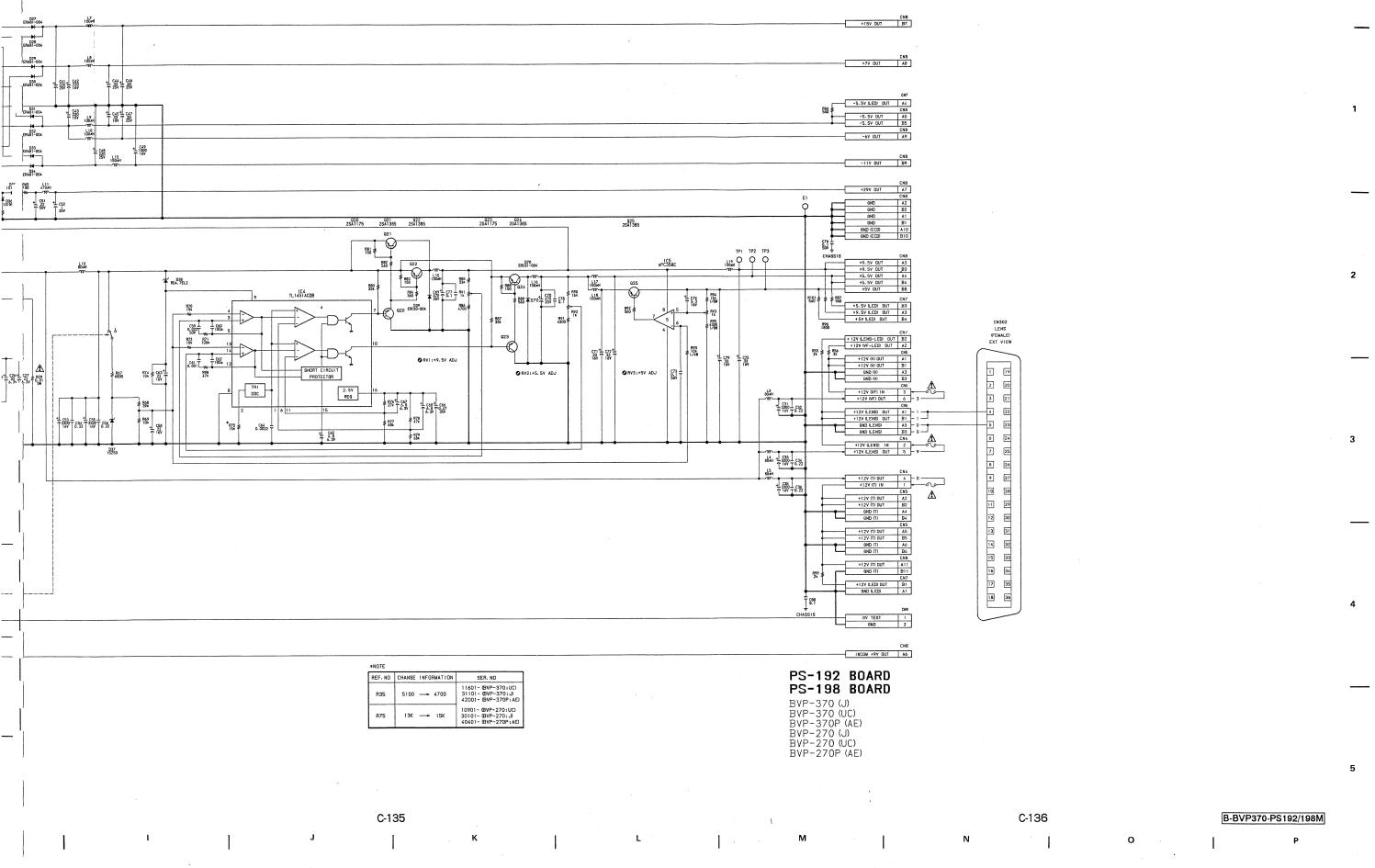


1-633-013-12 COMPONENT SIDE

PS-198	1-633-0	13-12	
CN1 CN2 CN3 CN4 CN5 CN6 CN7 CN8 CN9	I-6 H-5 I-6 F-5 E-5 E-5 E-1 G-6	Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18	K-: I-: H G G G G-: B C-:
D2 D3 D4 D5 D6 D7 D8	H-5 F-2 F-1 F-1 E-1 D-1 E-1	Q20 Q21 Q22 Q23 Q24 Q25	F-3 E-3 F-4 E-4 D-4
D9 D10 D11	D-1 K-6 I-3	RV1 RV2 RV3	E-! E-4 D-4
D12 D13	K-1 K-2	RY1	G-!
D14 D15 D16 D17	G-2 I-3 I-3 I-4	TP1 TP2 TP3	D-! D-! D-!
D18 D19 D20 D21 D22 D22 D22 D22 D25 D26 D27 D28 D29 D30 D31 D32 D33 D34 D35 D36 D37 D38 D39 D70	H-4 G-1 G-3 G-3 H-3 C-1 B-3 A-3 B-3 B-3 B-3 B-2 C-2 G-5 F-4 E-3	T1 T2 T3 T4	I – J H-: A-:
E1	D-5		
F1	J-6		
IC1 IC2 IC3 IC4 IC5	C-1 F-1 F-1 E-4 D-4		
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8	G-6 E-1 E-1 E-1 D-1 E-2 D-1 K-4		



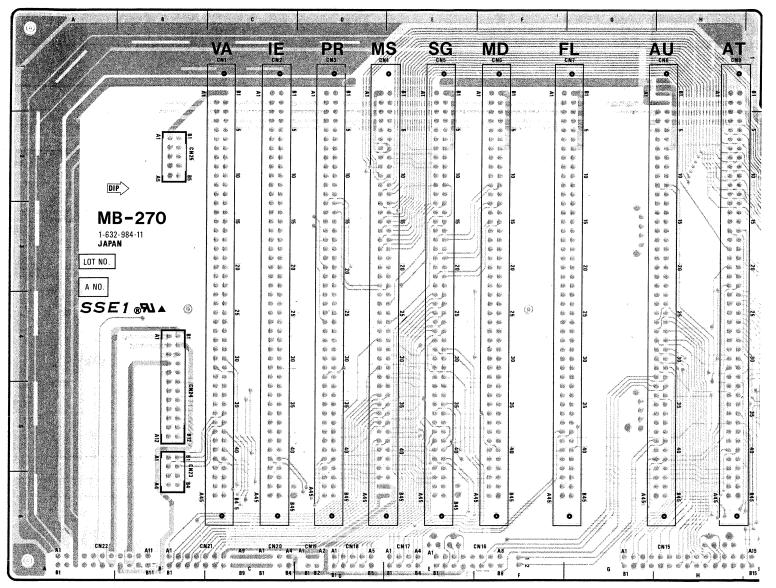
BVP-370/P BVP-270/P



FRAME WIRING (1/3) MB-270

MB-270 BOARD

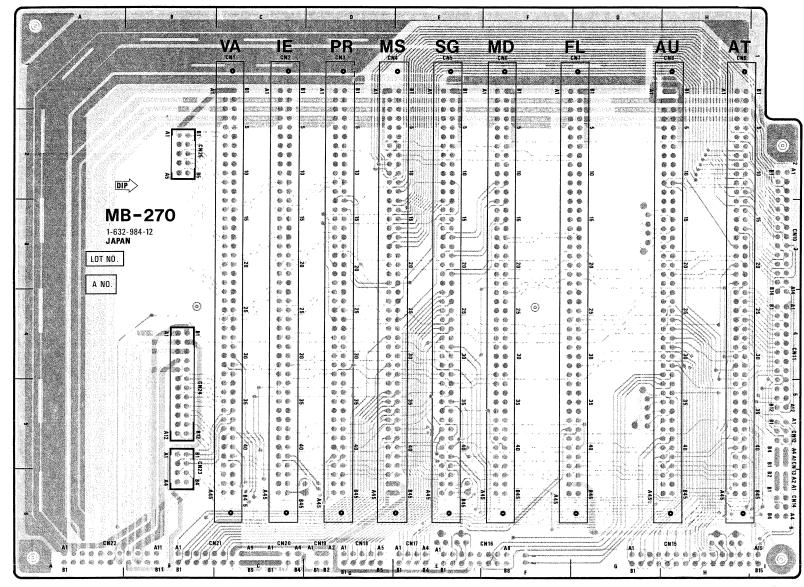
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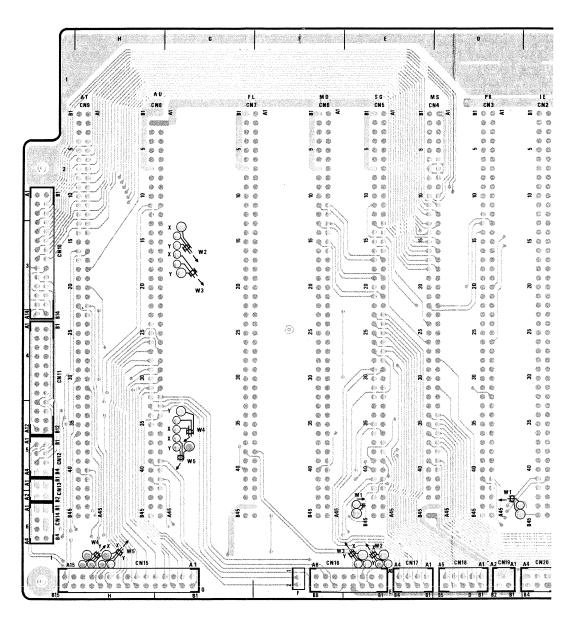
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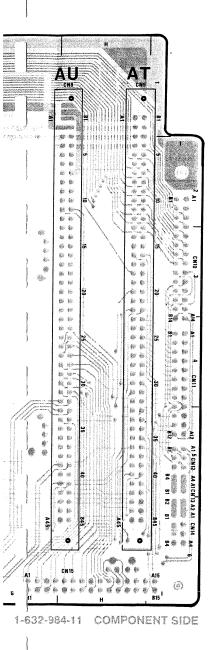
MB-270 BOARD

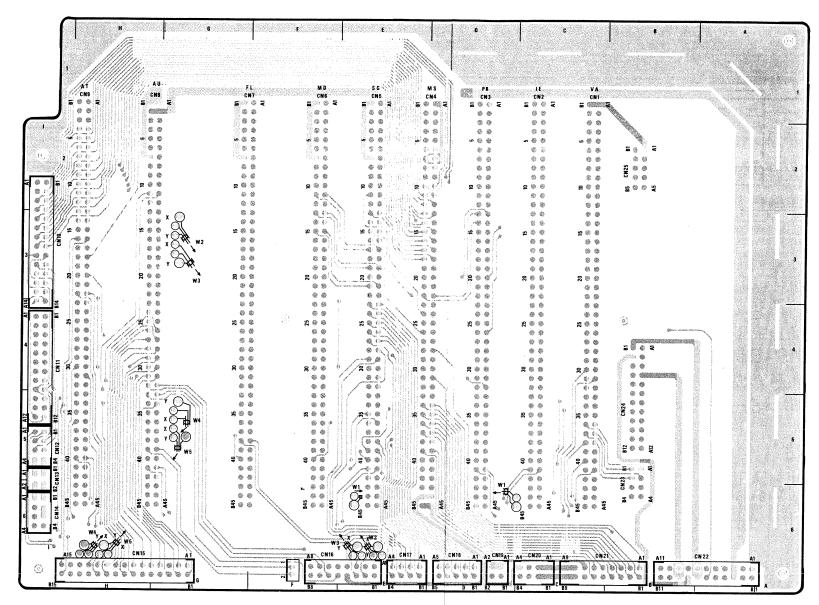
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1-632-984-12 COMPONENT SIDE





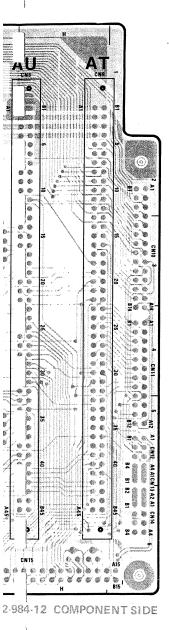


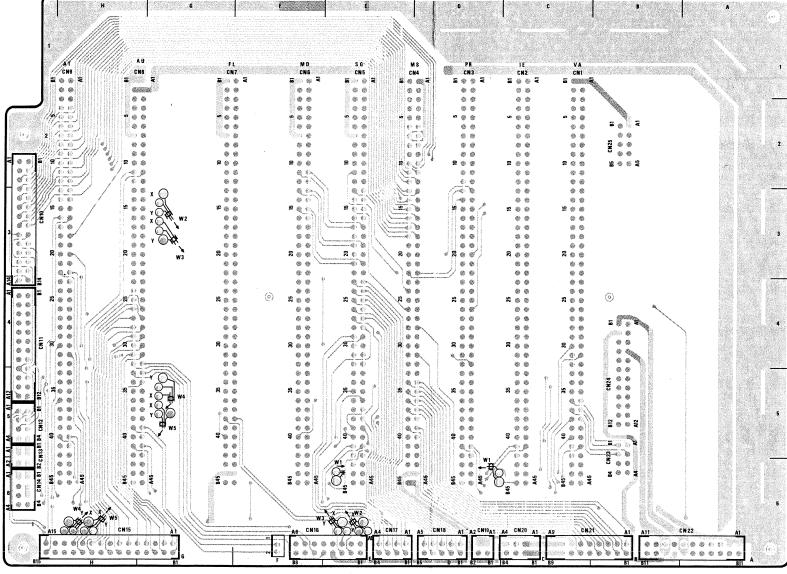
1-632-984-11 SOLDERING SIDE

C-139 (a)

C-140 (a)

BVP-370/P





1-632-984-12 SOLDERING SIDE

FRAME WIRING (1/3) MB-270 BOARD CN22 POWER CN22 POWER A1 BND (AT) B1 BND (AT) A2 GND B2 GND A3 +9.5V IN B3 +9.5V IN B4 +5.5V IN A4 +5.5V IN A5 -5.5V IN A6 INCOM +9V IN B-A5 B6 CONV.TRIG OUT A7 +29V IN B7 +15V IN B8 +5V IN 9ND 9ND +9.5V IN +9.5V IN +5.5V IN +5.5V IN -5.5V IN -5.5V IN GND GND +9.5V IN +9.5V IN +5.5V IN +5.5V IN -5.5V IN -5.5V IN PS-198 (1/2) B3 +5.5V IN A4 -5.5V IN B4 -5.5V IN A5 -5.5V IN A6 +5V OUT A6 +5V OUT A7 BLKG IN A7 BLKG IN A8 RET VIDEO IN A9 CURSOR H POSI IN 10-A3 B9 CURSOR H POSI IN 10-A3 A10 CURSOR H POSI IN 10-A3 -5.5V IN +9V OUT +5V OUT -SV OUT +9V DUT (VA) +5V DUT -5V DUT +9V OUT +9V 0UT +9V 0UT +5V OUT -5V OUT BLKG OUT -5V OUT BLKG IN GND -SV OUT 1 N 15V 1N -A7 6-A7 9-A7 SYS BLKG IN 5-A9 SYS BLKG OUT 3-A7 R (VA) VIDEO IN GND (VA VIDEO) R (PR) VIDEO IN 3-A14 GND (PR VIDEO) Y IN (SG) GND (SG) 3-A20 R (MS) VIDEO OUT R (SQ) VIDEO OUT 5-A11 OND (PR VIDEO) GND (SG) R (VA) VIDEO OUT GND (VA VIDEO) R (IE) VIDEO OUT GND (PR VIDEO) GND (IE VIDEO) B (PR) VIDEO IN 3-A26 BND (SB) Y RF OUT GND (Y RF) Y RF IN GND (Y RF) PA-102/164A CN 6 (AT) VIDEO OUT 9-B19 6 (MS) VIDEO OUT 9 (SG) VIDEO OUT 5-A13 6ND (PR VIDEO) R-Y OUT (MD) G (IE) VIDEO OUT GND (IE VIDEO) 2 R (PR) VIDEO IN 2 GND (PR VIDEO) CCU ON IN 9-B20 R-Y OUT (VTR) 18-A1 GND (VTR) 18-B1 B-Y OUT (VTR) 18-B2 CND (VTR) 18-A2 CHROMA RF DUT GND (CHROMA RF B (PA) VIDEO IN GND (PA VIDEO) B (VA) VIDEO IN B GND (VA VIDEO) G (PR) VIDEO IN GND (PR VIDEO) B (AT) VIDEO OUT 9-A20 B (MS) VIDEO OUT B (SG) VIDEO OUT 5-A15 GND (PR VIDEO) DR-103 OK24 CCD BLOCK 9 A1 4-299 GUT 4 B1 +159 GUT 3 A2 +77 GUT 7 A3 -69 GUT 7 A3 -69 GUT 8 A4 -117 GUT 0 B4 GRO CCDD 1 B5 GRO CCDD 1 B5 GRO CCDD 1 B5 GRO CCDD 1 B5 GRO CCDD 1 B5 GRO CCDD 1 B5 GRO CCDD 1 B5 GRO CCDD 1 B6 GRO CCDD 1 B7 FIELD FRAE GUT 1 B8 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 B9 GRO CCDD 1 A11 CLAWP GR IN I B44 A12 FIELD GUT 5-A38 A12 FIELD GUT 5-A38 N24 CCD BLOCK B (VA) VIDEO DUT BND (VA VIDEO) B (IE) VIDEO DUT CCD BND (AUDIO F GND (IE VIDEO) BLOCK NAM Y OUT 9-B29 DETAIL IN VF SEL COLOR/BW IN 21-A1 DETAIL DUT RET SEL OUT 21-B5 CABLE DATA PRE BLKG IN 5-A32 CCU SAMPLE IN TG-62/62P ETA/CCIR IN SYNC IN TG-135/135P SYNC IN PROMPT OU GND (PROMP1 A39 ZEBRA OUT 1-A39 A39 ZEBRA OUT 1-A39 A40 DIAG PULSE OUT 1-A39 A40 DIAG BATE OUT 9-A37 A41 SER O DATA IN 9-A41 B41 SER O LD IN 9-B41 A42 SER CK IN 9-A42 B42 VD OUT B43 CLAMP OUT A43 A44 A44 DIAG GATE IN MD DIAG DUT 5-B36 A40 DIAG GATE B40 FL DIAG DI A41 B41 A42 B42 VD IN A43 HD IN B43 CLAMP IN A44 B44 A45 B44 A45 VD IN Dac VD IN A43 HD IN B43 CLAMP IN A44 +12V IN A45 UP TALLY OUT B46 UP TALLY OUT A43 HD IN B43 CLAMP IN HD IN CLAMP IN A44 | B44 | A45 | 28MHz OUT | 2-A45 | B45 | GND | 2-B45 | 2 A1 FIX NO CT. DUT 1-B36 3 B1 FLT NO CT. DUT 1-B36 4 A2 FLT CCO CT. DUT 1-A37 4 A2 FLT CCO CT. DUT 1-A37 6 B2 FLT CCI CT. DUT 1-B37 7 A3 MD FDS1 IN 9-A22 8 B3 CC FDS1 IN 9-B22 1 A4 +12Y (T) DUT 0 B4 0ND (T) PRISM 5-A23 5-B23 5-B24 5-B24 5-B25 5-B25 5-A27 5-B28 4-A28 4-B34 4-B34 4-B35 4-B35 4-B36 4-B36 4-B36 4-B37 4-B37 4-B37 4-438 4-B38 5-B27 5-A27 5-A29 5-B29 7-A38 BLOCK | WICH NRO | SERVICE | WICH NRO | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SERVICE | SE 10.00 VF 11 OF SECURATION OF S RET DUT OND ORED OND ORED OND ORED OND ORED OND ORED OND ORED OND ORED OND ORED OND ORED OND ORED 30WER +12V (V) 1N BND (V) H12V (V) 1N GND (V) H12V (T) 11 GND (T) GND (T) GND (T) GND (T) BND FALLY WIC 1

C-142

G

Н

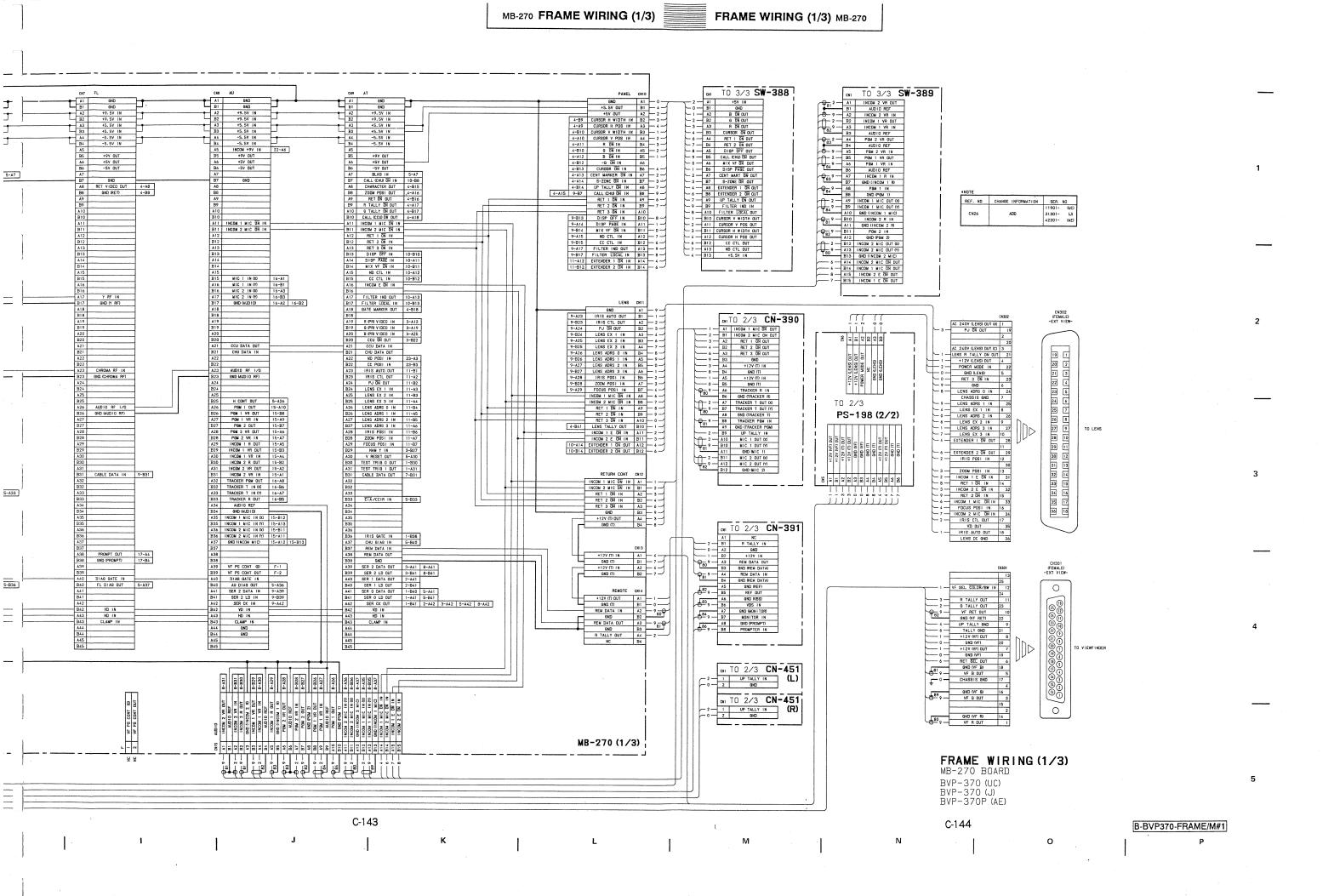
BVP-370/P

C-141

В

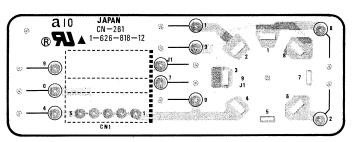
С

D



LF-15 BOARD





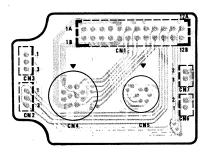
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CN-451 BOARD

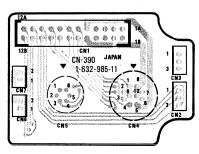
1-633-551-11 COMPONENT SIDE

CN-390 BOARD

Serial No. 10001 - 10010 (UC) 30001 - 30015 (J) 40001 - 40015 (AE)

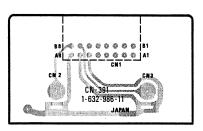


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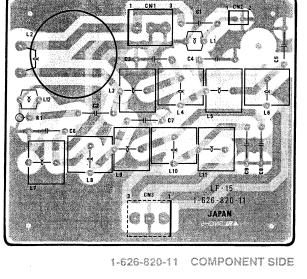


1-632-985-11 SOLDERING SIDE

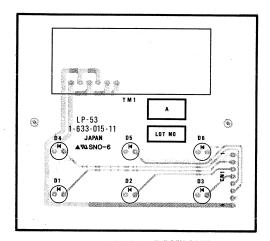
CN-391 BOARD



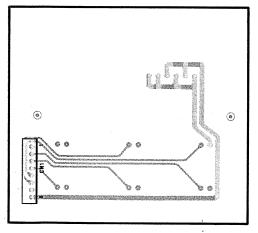
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LP-53 BOARD



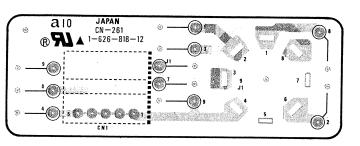
1-633-015-11 COMPONENT SIDE



1-633-015-11 SOLDERING SIDE

CN-261 BOARD

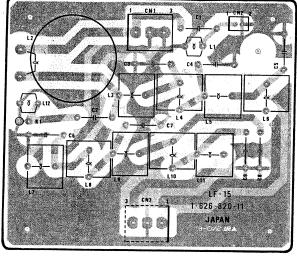
LF-15 BOARD



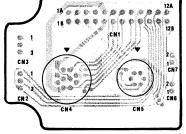
1-626-818-12 SOLDERING SIDE

CN-390 BOARD

Serial	No.	10101	_	(UC)
		30101	_	(J)
		40101	_	(AE)



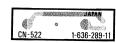
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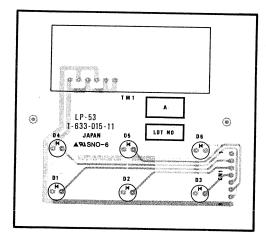
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CN-522 BOARD

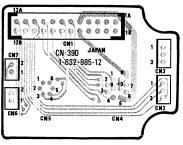
LP-53 BOARD



1-636-289-11 SOLDERING SIDE



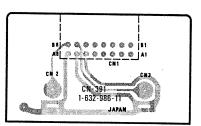
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1-632-985-12 SOLDERING SIDE

CN-391 BOARD

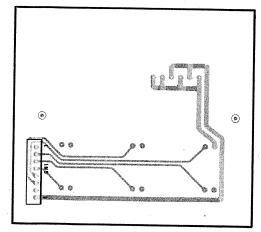
CN-451 BOARD



1-632-986-11 SOLDERING SIDE



1-633-551-11 COMPONENT SIDE



1-633-015-11 SOLDERING SIDE

C-147 (b)

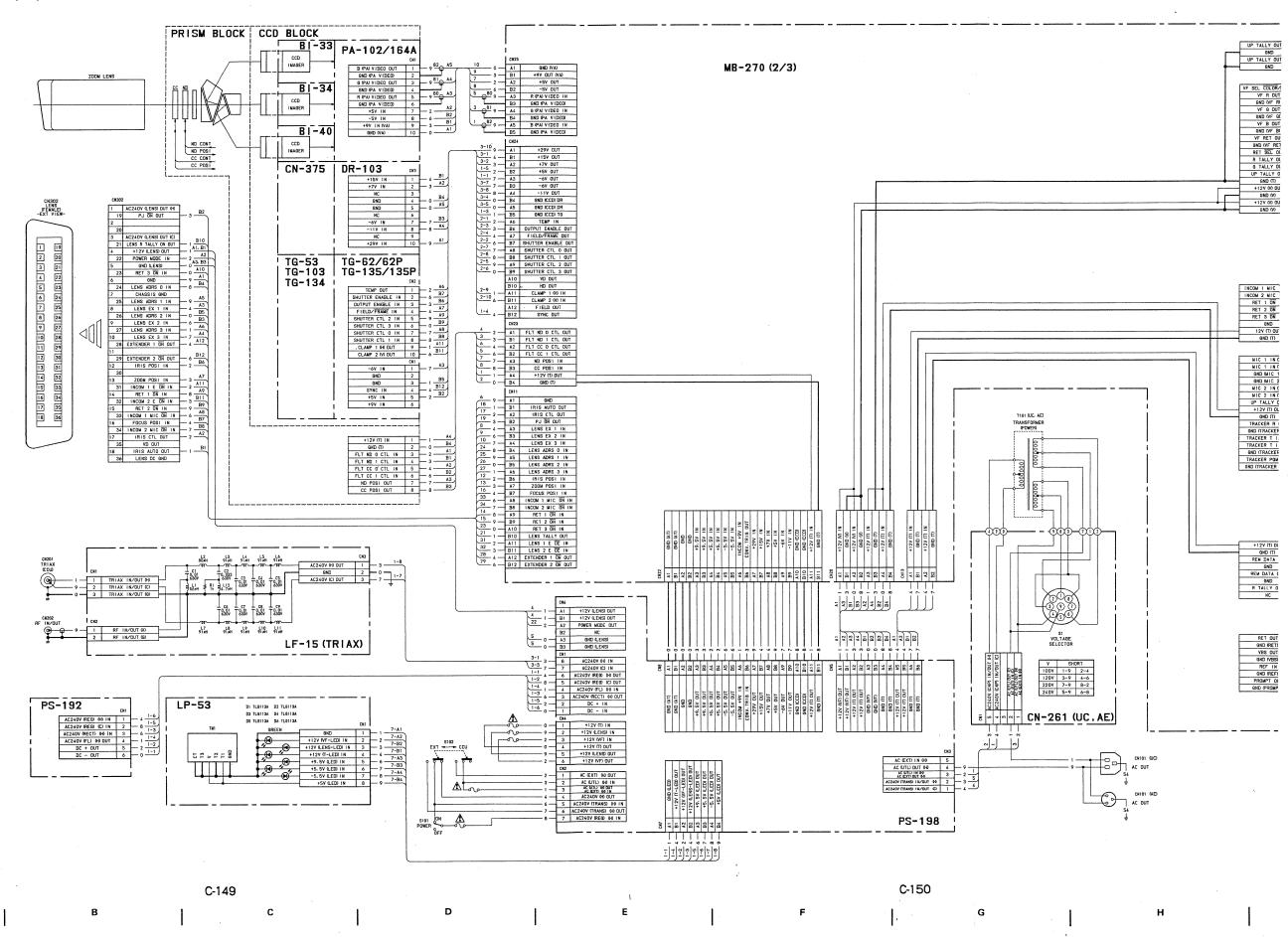
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BVP-370/P

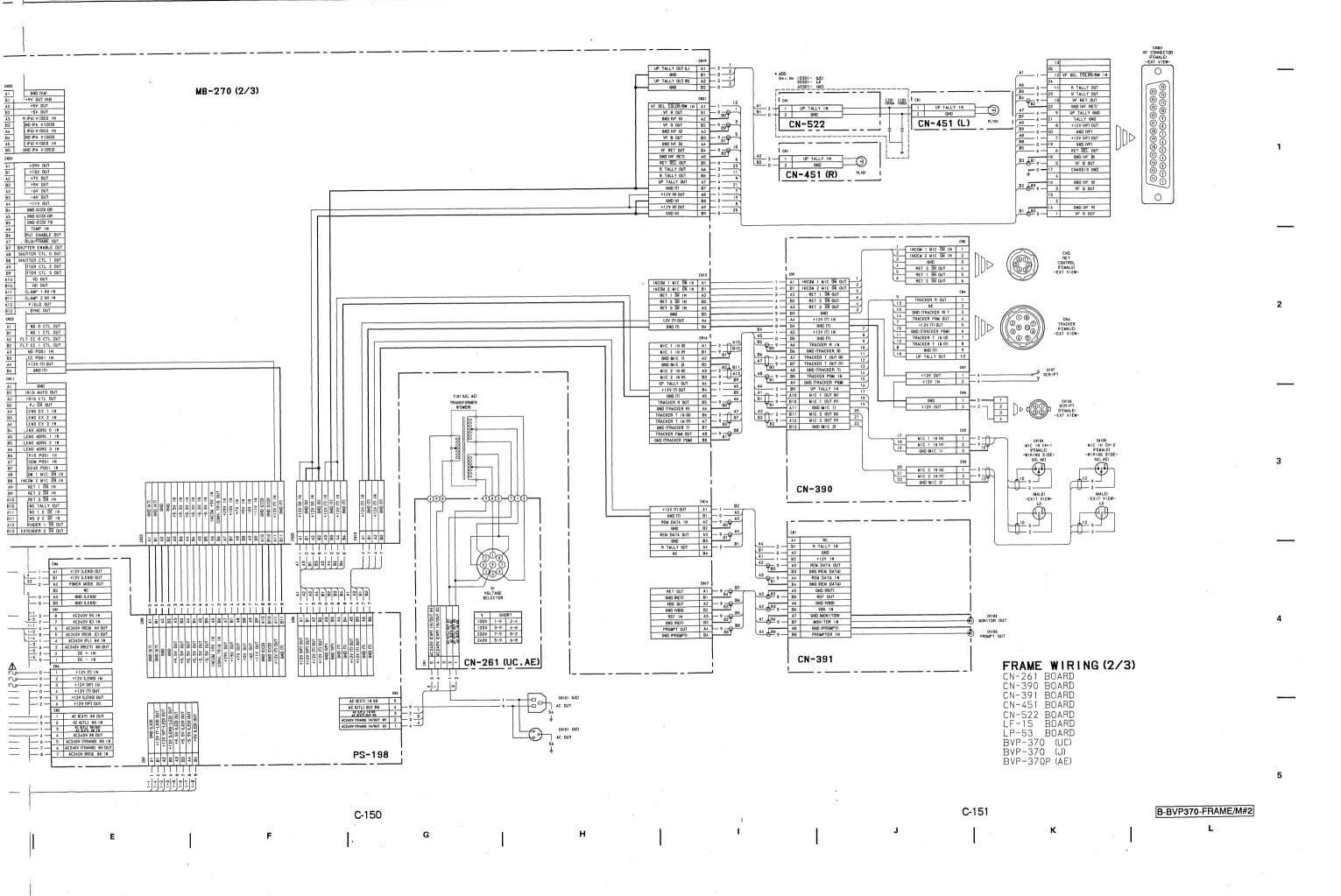
FRAME WIRING (2/3)

CN-261 BOARD CN-390 BOARD CN391 BOARD CN451 BOARD CN522 BOARD LF-15 BOARD LP-53 BOARD

BVP-370/P

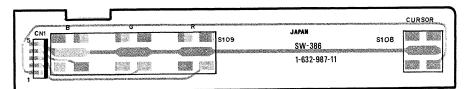


G 2/3)





Serial No. 10001 - 10010 (UC) 30001 - 30015 (J) 40001 - 40015 (AE)

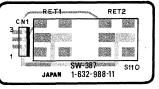


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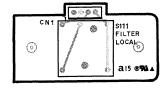
SW-387 BOARD

Serial No. 10001 - 10010 (UC) 30001 - 30015 (J) 40001 - 40015 (AE)

SW-417 BOARD



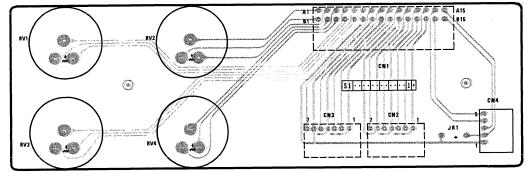
1-632-988-11 SOLDERING SIDE



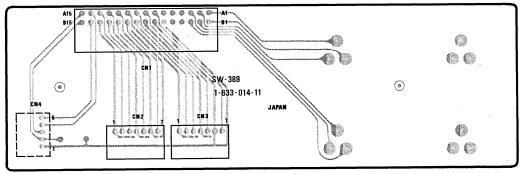
1-632-990-11 COMPONENT SIDE

SW-389 BOARD

Serial No. 10001 - 10010 (UC) 30001 - 30015 (J) 40001 - 40015 (AE)



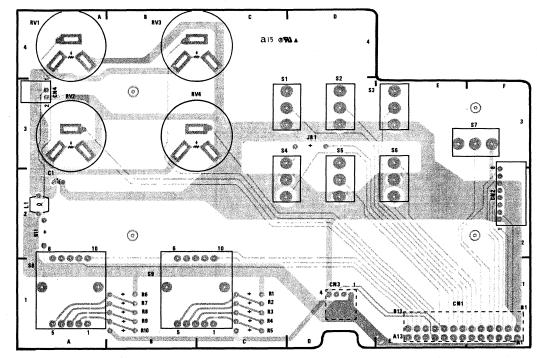
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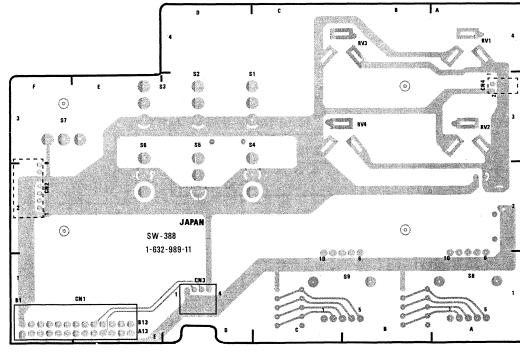
1-633-014-11 SOLDERING SIDE

SW-388 BOARD

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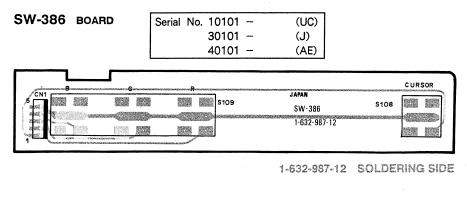


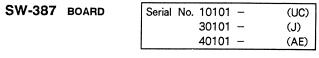
1-632-989-11 COMPONENT SIDE



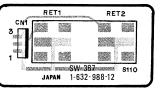
1-632-989-11 SOLDERING SIDE

SW-388 BOARD





SW-417 BOARD

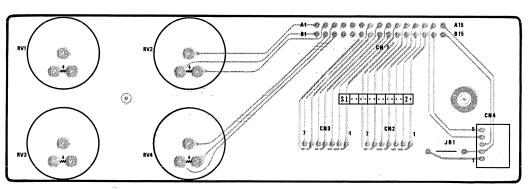


1-632-988-12 SOLDERING SIDE

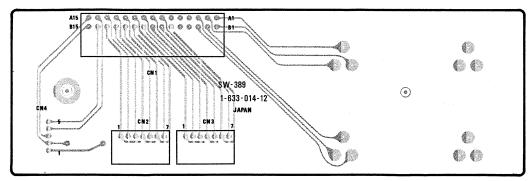
1-632-990-11 COMPONENT SIDE

SW-389 BOARD

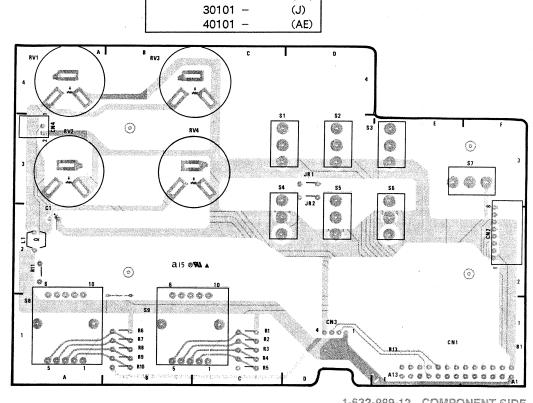
Serial	No.	10101	_	(UC)
		30101	-	(J)
		40101	_	(AE)



1-633-014-12 COMPONENT SIDE



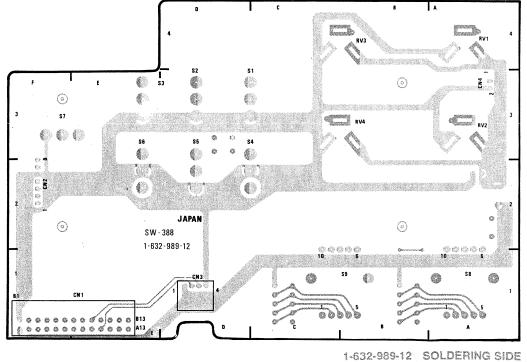
1-633-014-12 SOLDERING SIDE



(UC)

Serial No. 10101 -

1-632-989-12 COMPONENT SIDE



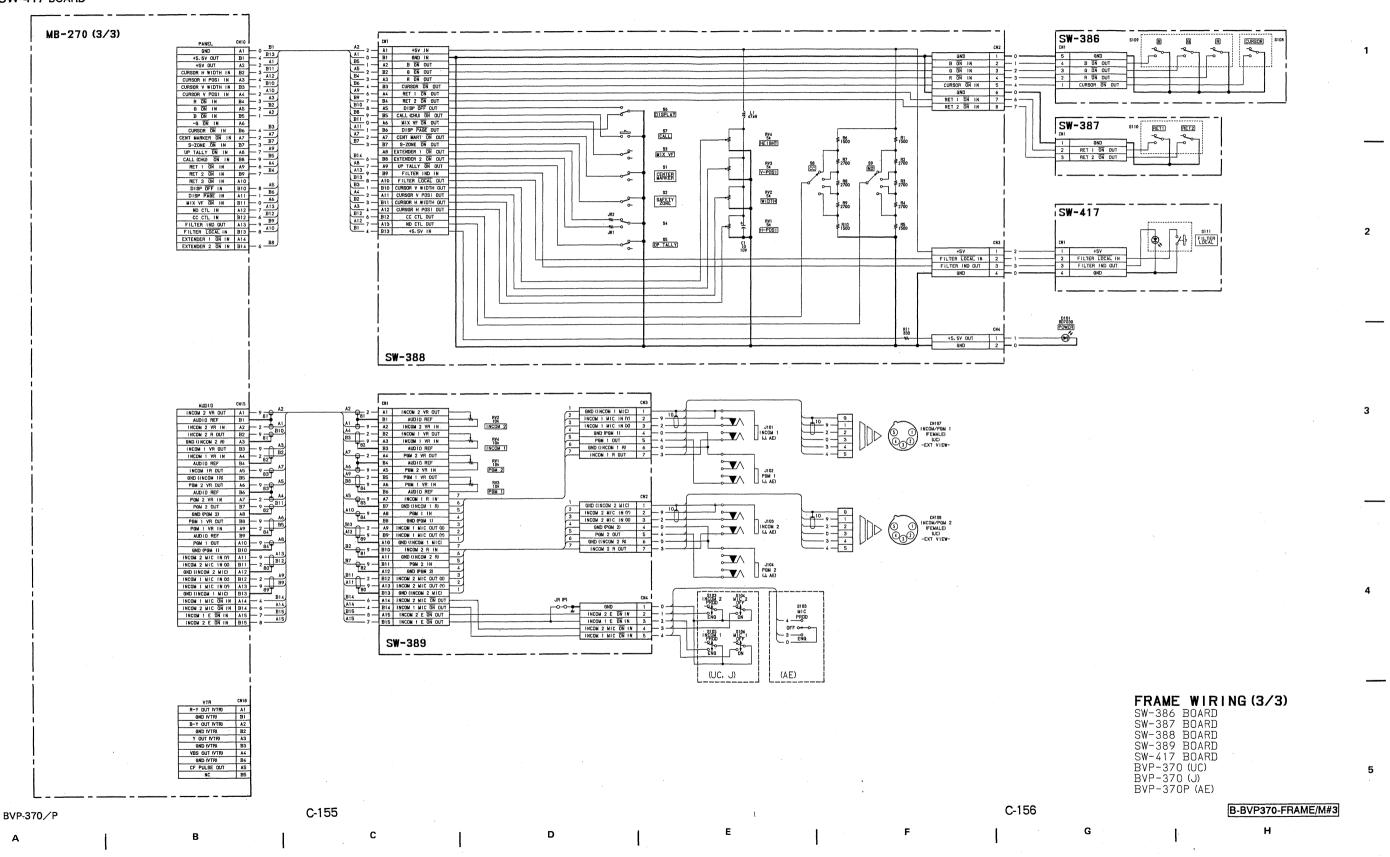
FRAME WIRING (3/3)

SW-386 BOARD

SW-387 BOARD

SW-388 BOARD

SW-389 BOARD SW-417 BOARD



SECTION D SPARE PARTS

PARTS INFORMATION

1. Safety Related Component Warning

Components identified by shading marked with Λ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose parts numbers appear as shown in this manual or in service manual supplements published by Sony.

2. Replace parts that are supplied from Sony Parts Center can sometimes have different shape and external appearance than what are actually used in equipment. This is due to accommodating the improved parts and/or engineering changes or standardization of genuine parts.

This manual's exploded view and electrical spare parts lists are indicating the parts numbers of "the standardized genuine parts at present."

- Regarding engineering parts and diagrams changes in our engineering department, refer to Sony service bulletins and service manual supplements.
- 3. The parts marked with "S" in the SP column of the exploded views and electrical spare parts list are normally required for routine service work. Orders for parts marked with "O" will be processed, but allow for additional delivery time.
- 4. Item with no parts number and/or no description are not stocked because they are seldom required for routine service.

5. Abbreviation

REF. No.	DESCRIPTION	REF. No.	DESCRIPTION	REF. No.	DESCRIPTION
вт	BATTERY	FB	FERRITE BEAD	RV	VARIABLE RESISTOR
BZ	BUZZER	FL	FILTER	RY	RELAY
С	CAPACITOR	IC	IC	S	SWITCH
CN	CONNECTOR	L	INDUCTOR	Т	TRANSFORMER
СР	COMBINATION PARTS	LV	VARIABLE INDUCTOR	TH	THERMISTOR
CV	VARIABLE CAPACITOR	Q	TRANSISTOR	TM	TIMER
D	DIODE	R	RESISTOR	VDR	VARISTOR
DL	DELAY LINE	RB	RESISTOR BLOCK	Х	OSCILLATOR

All capacitors are in micro farads unless otherwise specified.

All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

EXPLODED VIEW

FRONT PANEL BLOCK

*1) When replacing the CCD unit having block No. LxxxxxN or LxxxxxP with the CCD block of parts No. A-7575-218-A or A-8267-490-A, replacing the LOW PASS FILTER UNIT with the DUMMY GLASS UNIT (Sony Part No.1-547-403-11) is also required at the same time. For details, see Section 3 REPLACEMENT OF MAIN PARTS.

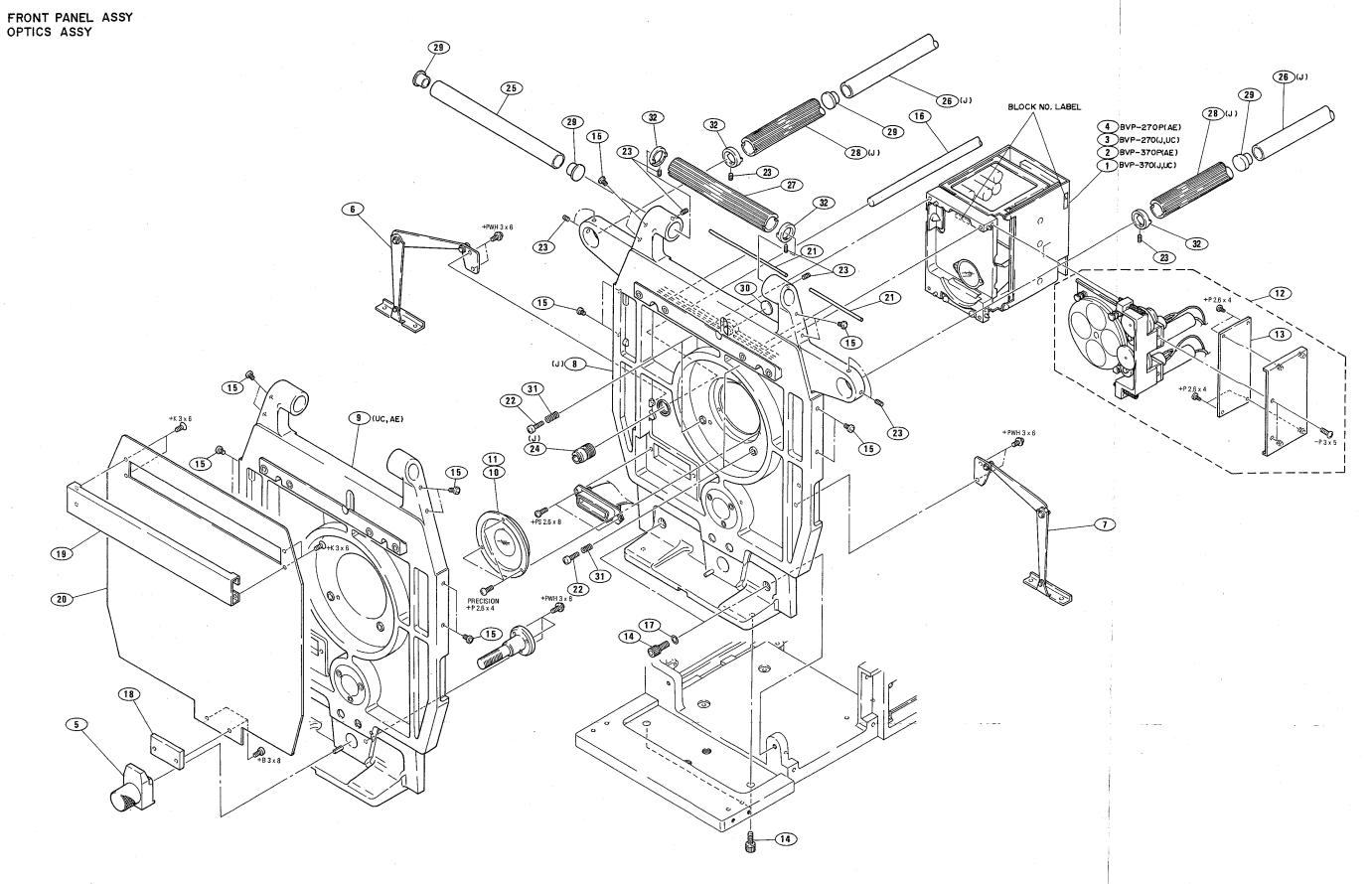
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*2) E K A XXXXX

| Block No. of CCD unit |
| Suffix of Spare Part No. |
| Model Name (K; BVP-370, L; BVP-370P)
| CCD Type
```

```
*3) O A XXXXX N

N:NTSC, P:CCIR
Block number of CCD UNIT
Indicates a version of CCD unit
```

FRONT PANEL BLOCK



RIGHT SIDE PANEL BLOCK RIGHT PANEL ASSY CONNECTOR BOX(TK)ASSY CONNECTOR PANEL ASSY 183 (UC,AE) BVP-270 128 118 121 + PSW 3 x 6 186 116 (13B) W 6 O CO 122 0 140 126 101 BVP-370 102 BVP-270 D-6

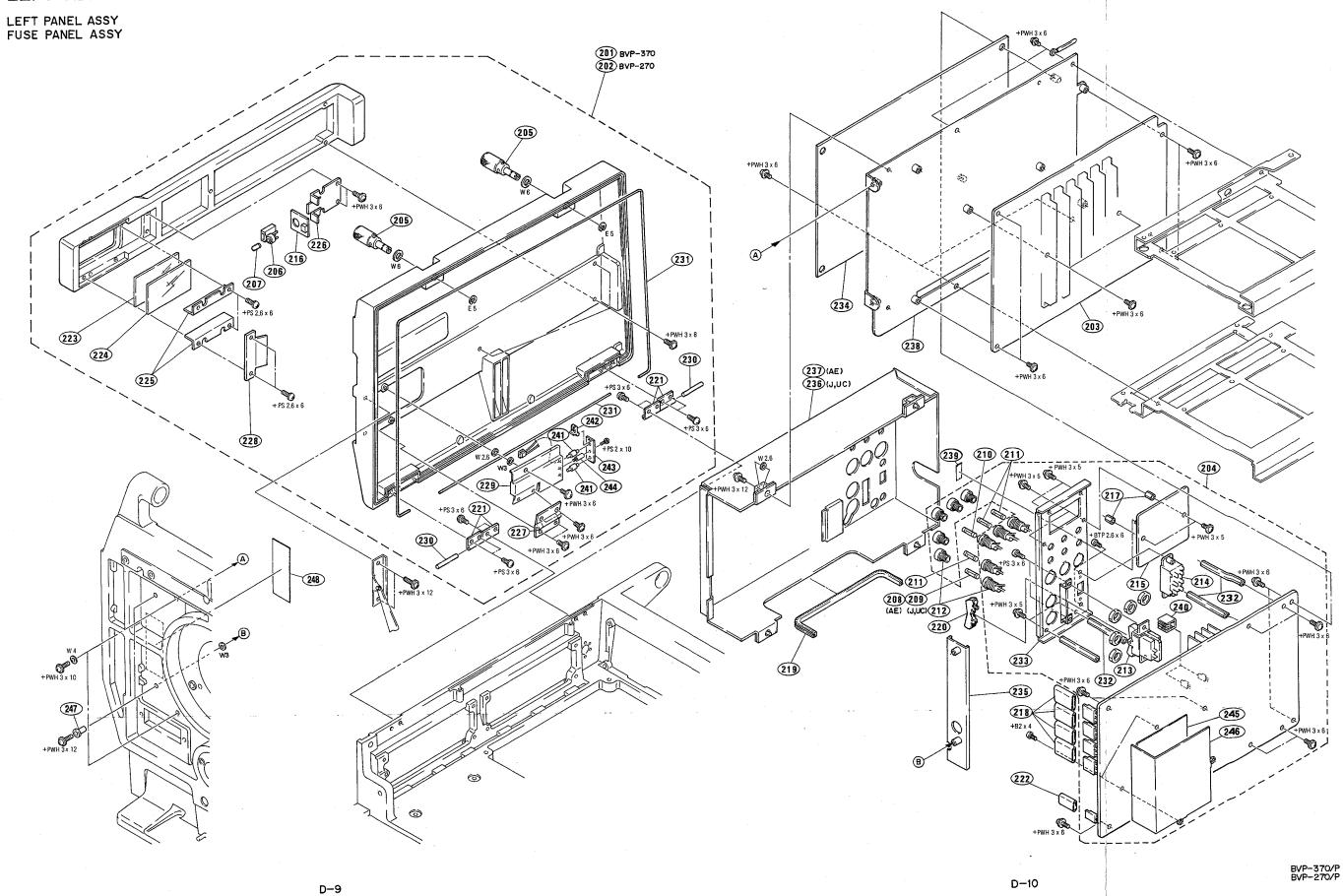
RIGHT SIDE PANEL BLOCK

```
SP Description
No.
                          Part No.
                         A-7420-175-A o PANEL (RIGHT) ASSY, SIDE (BVP-370)
A-7420-178-A o PANEL (RIGHT) ASSY, SIDE (BVP-270)
A-7603-129-A o PANEL (MIC) ASSY, CONNECTOR
(BVP-370:UC, AE)
A-7603-130-A o PANEL (MIC) ASSY, CONNECTOR
(BVP-370:J)
101
102
103
104
                           A-7612-371-B o KNOB ASSY
105
                          X-3740-802-1 o STOPPER ASSY, PC BOARD
1-509-176-31 s CONNECTOR, 3P MALE
"MIC IN CH-1, CH-2" (BVP-370: J)
1-509-184-31 s CONNECTOR 3P FEMALE
"MIC IN CH-1, CH-2" (BVP-370: UC, AE)
1-517-075-00 s SOCKET, LAMP
1-518-411-00 s LAMP
106
107
108
                           1-560-743-00 s CONNECTOR, COAXIAL (MALE) (UC)
1-561-376-00 s CONNECTOR (S) 4P FEMALE "SCRIPT"
1-561-844-00 s CONNECTOR, COAXIAL FEMALE (AE)
1-562-222-00 s CONNECTOR 6P FEMALE "RET CONTROL"
1-565-443-11 o CONNECTOR 10P FEMALE "TRACKER"
                          1-565-656-11 o CONNECTOR, COAXIAL (2.5C) (MALE)
1-565-797-11 s CONNECTOR, DOUBLE COAXIAL (J)
1-570-296-21 s SWITCH, TOGGLE "SCRIPT"
1-575-400-11 o CABLE ASSY, RF
1-626-820-11 o PRINTED CIRCUIT BOARD, LF-15
118
119
                          1-632-985-12 o PRINTED CIRCUIT BOARD, CN-390
1-633-551-11 o PRINTED CIRCUIT BOARD, CN-451
2-111-359-01 o BRACKET, F CONNECTOR (AE)
2-111-360-01 o TABLE, CONNECTOR
2-111-361-01 o BRACKET, K CONNECTOR (J, UC)
                          2-365-236-00 o LUG (K), GROUND (J, UC)
2-365-265-00 o LUG (F)(2), GROUND (AE)
3-678-769-00 s CAP
3-685-115-01 s CAP (6P), DROP PROTECTION
3-692-358-02 o HINGE
                          3-692-536-02 o COVER (A), TALLY
3-692-537-02 o COVER (B), TALLY
3-692-538-01 o RETAINER, TALLY COVER
3-692-539-01 o HOLDER, TALLY
3-692-540-01 o HINGE
                          3-692-541-02 o COVER (1), REAR, TALLY
3-166-451-02 o COVER (R), TALLY
3-692-547-01 o PIN, PARALLEL
3-698-120-01 o TUBE, SHIELD
3-698-121-01 s SCREW (M4)
                          3-698-150-01 o NUT, PLATE
3-698-165-04 o PLATE, SHIELD
3-698-167-03 o BOX, CONNECTOR
3-740-843-01 o PANEL (C), CONNECTOR (BVP-370)
3-740-867-01 o PANEL (B), CONNECTOR (BVP-270)
                         3-741-725-01 o CAP (TK), CONNECTOR, TRIAX (J)
3-741-726-01 o CAP (2), XLR (BVP-370:J)
3-741-727-01 o CAP (1), XLR (BVP-370:UC, AE)
4-858-582-00 s SPRING, COMPRESSION
1-102-363-00 s CAP, CERAMIC 1000PF
                          1-506-481-11 o CONNECTOR, 2P
1-636-289-11 o PRINTED CIRCUIT BOARD, CN-522
3-657-841-51 o SPACER 2X6
3-167-280-01 o SUPPORT
```

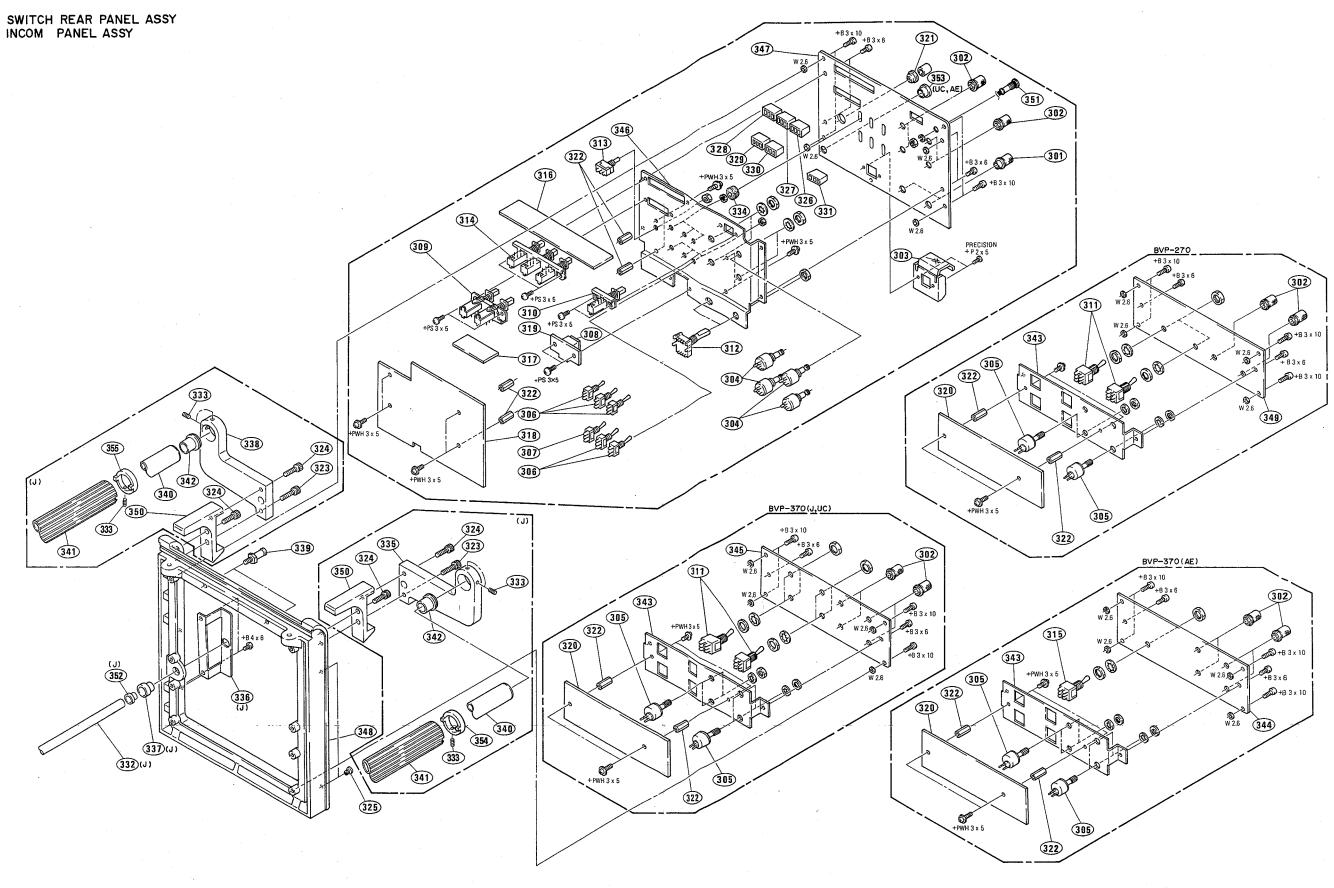
LEFT SIDE PANEL BLOCK

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SP Description
                           Part No.
No.
                           A-7420-174-A o PANEL (LEFT) ASSY, SIDE (BVP-370)
A-7420-177-A o PANEL (LEFT) ASSY, SIDE (BVP-270)
A-7515-062-A o MOUNTED CIRCUIT BOARD, MB-270
A-7515-076-A o MOUNTED CIRCUIT BOARD, PS-198
A-7612-371-B o KNOB ASSY
                   1-517-075-00 s SOCKET, LAMP
1-518-411-00 s LAMP
▲1-532-284-00 s FUSE, TIME-LAG 0.63A 250V (AE)
▲1-532-285-00 s FUSE, TIME-LAG 1.25A 250V (J, UC)
▲1-532-325-00 s FUSE, TIME-LAG 6.3A 250V
                             1-532-598-00 s FUSE, GLASS TUBE 4A 250V
1-533-188-11 s HOLDER, FUSE
1-570-117-41 s SWITCH, ROCKER (AC POWER)
1-570-173-11 s SWITCH, VOLTAGE SELECTOR
1-633-015-11 o PRINTED CIRCUIT BOARD, LP-53
                             1-633-551-11 o PRINTED CIRCUIT BOARD, CN-451
2-280-622-11 o SUPPORT (M3), HEXAGON
2-359-909-01 o TUBE (A), HEAT SINK RUBBER
3-512-114-00 s BUSH
3-688-814-11 s CAP, SWITCH
                             3-692-358-02 o HINGE
3-692-448-01 o TUBE (B), HEAT SINK RUBBER
3-692-536-02 o COVER (A), TALLY
3-692-537-02 o COVER (B), TALLY
3-692-538-01 o RETAINER, TALLY COVER
                              3-692-539-01 o HOLDER, TALLY
3-692-540-01 o HINGE
3-692-541-02 o COVER (1), REAR, TALLY
3-166-450-02 o COVER (L), TALLY
3-692-547-01 o PIN, PARALLEL
                               3-698-120-01 o TUBE, SHIELD
3-740-829-01 o SUPPORT, HEXAGON
3-740-839-01 o BRACKET, FUSE
3-740-849-01 o SHEET, INSULATING
3-740-850-01 o RETAINER, TRANSISTOR
                               3-740-853-02 o COVER, POWER(J, UC)
3-740-853-12 o COVER, POWER(AE)
3-740-857-01 o PARTITION (1)
3-740-880-01 o SHEET, BLIND, TIMER SW
3-741-724-01 o HEAT SINK (TO-126)
                               1-102-363-00 s CAP, CERAMIC 1000PF
1-506-481-11 o CONNECTOR 2P
1-636-289-11 o PRINTED CIRCUIT BOARD, CN-522
3-657-841-51 o SPACER 2X6
3-166-751-01 o RUBBER, SHIELD
                                3\!-\!166\!-\!752\!-\!02 o PLATE, SHIELD TRANSFORMER 2\!-\!832\!-\!004\!-\!00 s WASHER (YC-100), INSULATING 3\!-\!168\!-\!031\!-\!01 o SHEET, RADIATION
```

LEFT SIDE PANEL BLOCK



REAR PANEL BLOCK



D-11

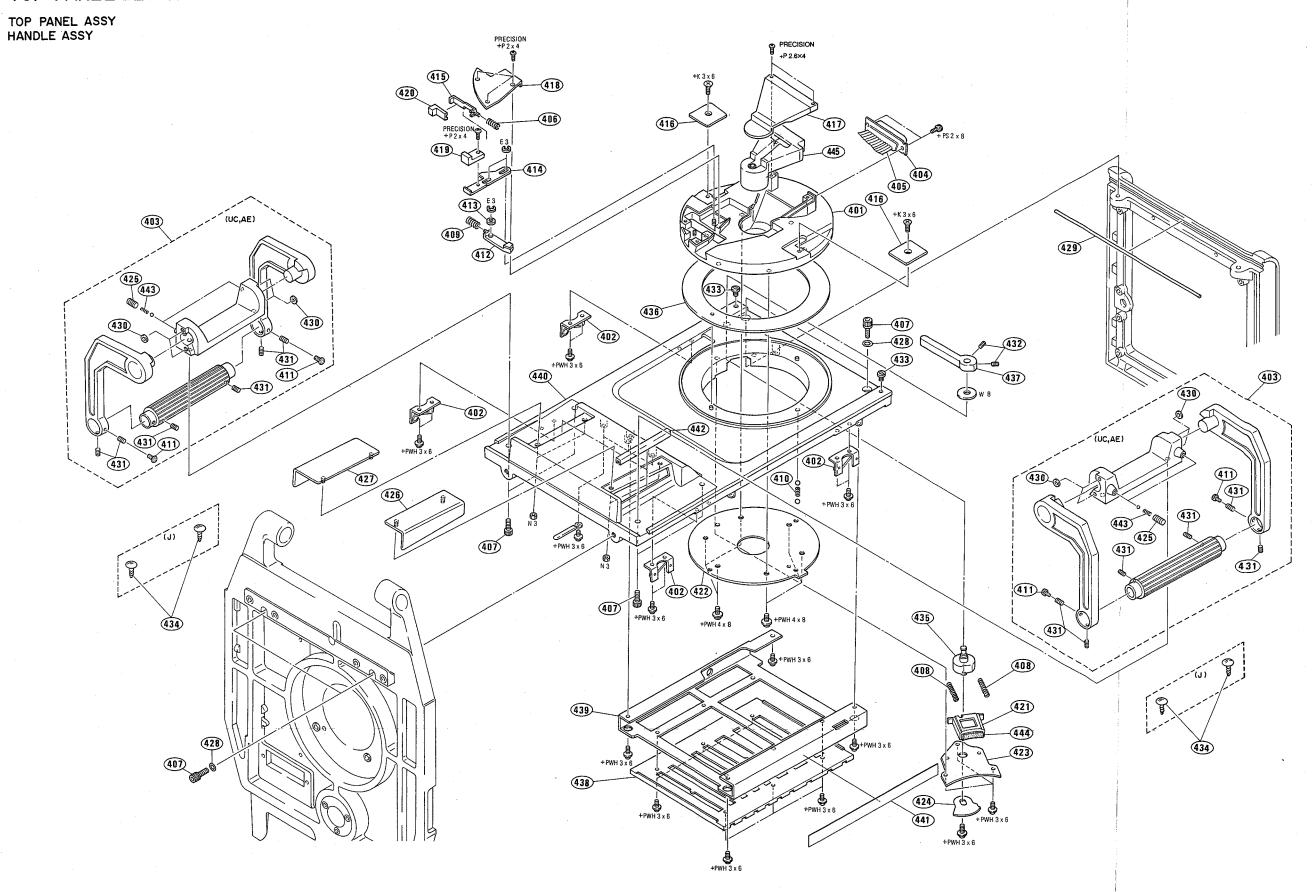
REAR PANEL BLOCK

```
Part No.
                                                                                 SP Description
No.
                            X-3165-625-1 s KNOB ASSY, VOLUME (BVP-370)
X-3165-620-1 s KNOB (2) ASSY, CONTROL
X-3740-810-1 o GUIDE ASSY, SWITCH
1-224-981-41 s RES, VAR, CERMET 5K
"H-POSI" "V-POSI" "WIDTH" "HEIGHT"
1-238-214-21 s RES, VAR, CARBON 10K
305
                             1-554-355-00 s SWITCH, TOGGLE "CENTER MARKER"
"SAFETY ZONE" "MIX VF" "UP TALLY"
1-554-770-11 s SWITCH, TOGGLE "DISPLAY"
1-570-142-11 s SWITCH, PUSH "FILTER LOCAL"
1-570-170-12 s SWITCH, PUSH (2 KEY) "RET 1, RET 2"
1-570-171-12 s SWITCH, PUSH (1 KEY) "CURSOR"
 306
 307
308
309
310
                               1-570-296-21 s SWITCH, TOGGLE
1-572-196-11 s SWITCH, ROTARY "CC, ND"
1-572-197-11 s SWITCH, PUSH (1 KEY) "CALL"
1-572-204-11 s SWITCH, PUSH (3 KEY) "R G B"
1-572-205-21 s SWITCH, TOGGLE (BVP-370P:AE)
                               1-632-987-11 o PRINTED CIRCUIT BOARD, SW-386
1-632-988-11 o PRINTED CIRCUIT BOARD, SW-387
1-632-989-11 o PRINTED CIRCUIT BOARD, SW-388
1-632-990-11 o PRINTED CIRCUIT BOARD, SW-417
1-633-014-11 o PRINTED CIRCUIT BOARD, SW-389
  316
317
318
319
320
                               2\text{-}270\text{-}607\text{-}00 s RING, GUARD 2-280-622-41 o SUPPORT (M3), HEXAGON 2-391-520-00 o BOLT (M5X15), HOLE, HEXAGON 2-391-520-21 s BOLT (M5X12), HOLE, HEXAGON 3-673-018-11 s SCREW, BLIND
                                 3-692-320-01 o BUTTON
3-692-321-01 o BUTTON
3-692-322-01 o BUTTON
3-692-324-01 o BUTTON
3-692-325-01 o BUTTON
                                3-692-326-01 o BUTTON
3-692-449-01 o GUIDE, LENS BAR (J)
3-701-510-00 s SET SCREW, DOUBLE POINT 4X4
3-729-007-01 o PLATE, ORNAMENTAL, TOGGLE SW
3-740-806-01 o SUPPORT (R), HANDLE (J)
                                 3-740-809-01 o GUIDE (J)
3-740-810-01 o GUIDE (REAR) (J)
3-740-812-01 o SUPPORT (LEFT), HANDLE (J)
3-740-814-01 o SHAFT
3-740-815-21 o PIPE, HANDLE (J)
                                 3-173-303-21 o COVER, PIPE (J)
3-740-817-01 o ESCUTCHEON, PIPE
3-740-844-01 o BRACKET, INCOME VR
3-740-845-01 o PANEL (1), INCOME (BVP-370P:AE)
3-740-846-01 o PANEL (2), INCOME
                                 3-740-855-02 o BRACKET, SWITCH
3-740-856-01 o PANEL (2), SWITCH
3-740-865-13 o CHASSIS (R)
3-740-869-01 o PANEL (3), INCOM (BVP-270)
3-741-747-01 o TABLE, HANDLE (J)
   346
347
348
349
350
                                8-719-907-03 s DIODE BD703G "POWER"
3-741-789-01 o SPACER (J)
3-741-790-01 o CAP, BLIND (UC, AE)
3-173-304-01 o RING, STOPPER
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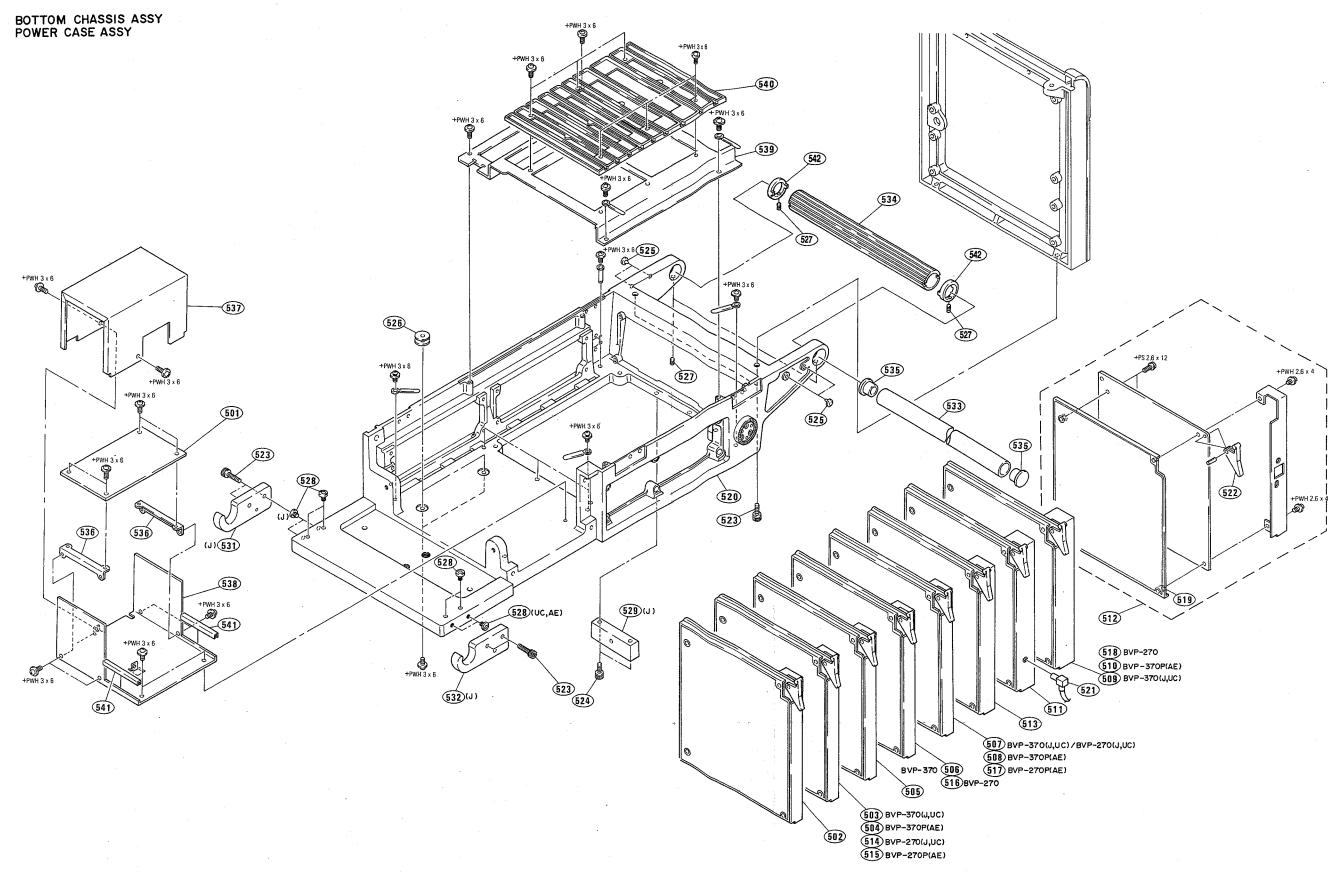
TOP PANEL BLOCK

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SP Description
                         Part No.
No.
                         X-3692-315-3 o RETAINER ASSY, PAN BASE
X-3740-801-2 o STOPPER ASSY, SIDE PLATE
X-3740-804-1 o HANDLE ASSY (UC, AE)
1-562-989-11 s CONNECTOR, MULTI 25P FEMALE
1-945-163-11 o HARNESS (VF)
                         2\text{-}083\text{-}308\text{-}00 s SPRING 2-391-520-21 s BOLT (M5X12), HOLE, HEXAGON 3-127-111-00 o SPRING 3-634-355-00 s SPRING 3-641-622-00 s SPRING, COMPRESSION
                           3-676-081-02 o CUSHION, TC
3-692-327-03 o PIN (JOINT)
3-692-328-01 o SPACER (JOINT)
3-692-329-01 o LEVER (A) (JOINT)
3-692-330-01 o LEVER (B) (JOINT)
                           3-692-332-01 o PLATE (A)
3-692-363-02 o GUARD, HARNESS
3-692-365-02 o PLATE, BLIND
3-692-370-01 o COVER, LEVER (A)
3-692-371-01 o COVER, LEVER (B)
                           3-692-465-02 o SHOE, SLIDE
3-692-468-01 o RETAINER, PAN BASE
3-692-470-04 o RETAINER
3-692-471-01 o PLATE, STOPPER
3-692-532-01 o SCREW (WP) (MSX5), HOLE
                           3-701-510-00 s SET SCREW, DOUBLE POINT 4X4
3-701-511-00 s SET SCREW, DOUBLE POINT 4X6
3-725-907-01 s BUSHING, BLIND (UC, AE)
3-729-605-01 o CLIP, TREE (J)
3-740-818-01 o PIN, PAN STOPPER
                             3-740-819-01 o RING, PAN BASE RETAINER
3-740-820-02 o LEVER, LOCK
3-740-859-01 o RAIL, PC BOARD
3-740-860-01 o TABLE, RAIL
3-740-864-01 o CHASSIS, T
                             3-741-728-01 o LABEL, PC BOARD
3-741-773-01 o EDGING, RUBBER
3-887-632-00 s SPRING (DRUM)
9-911-851-XX o PAD, BRAKE
3-166-820-01 s RUBBER, VF
```

TOP PANEL BLOCK



CHASSIS BLOCK(1)



D-18

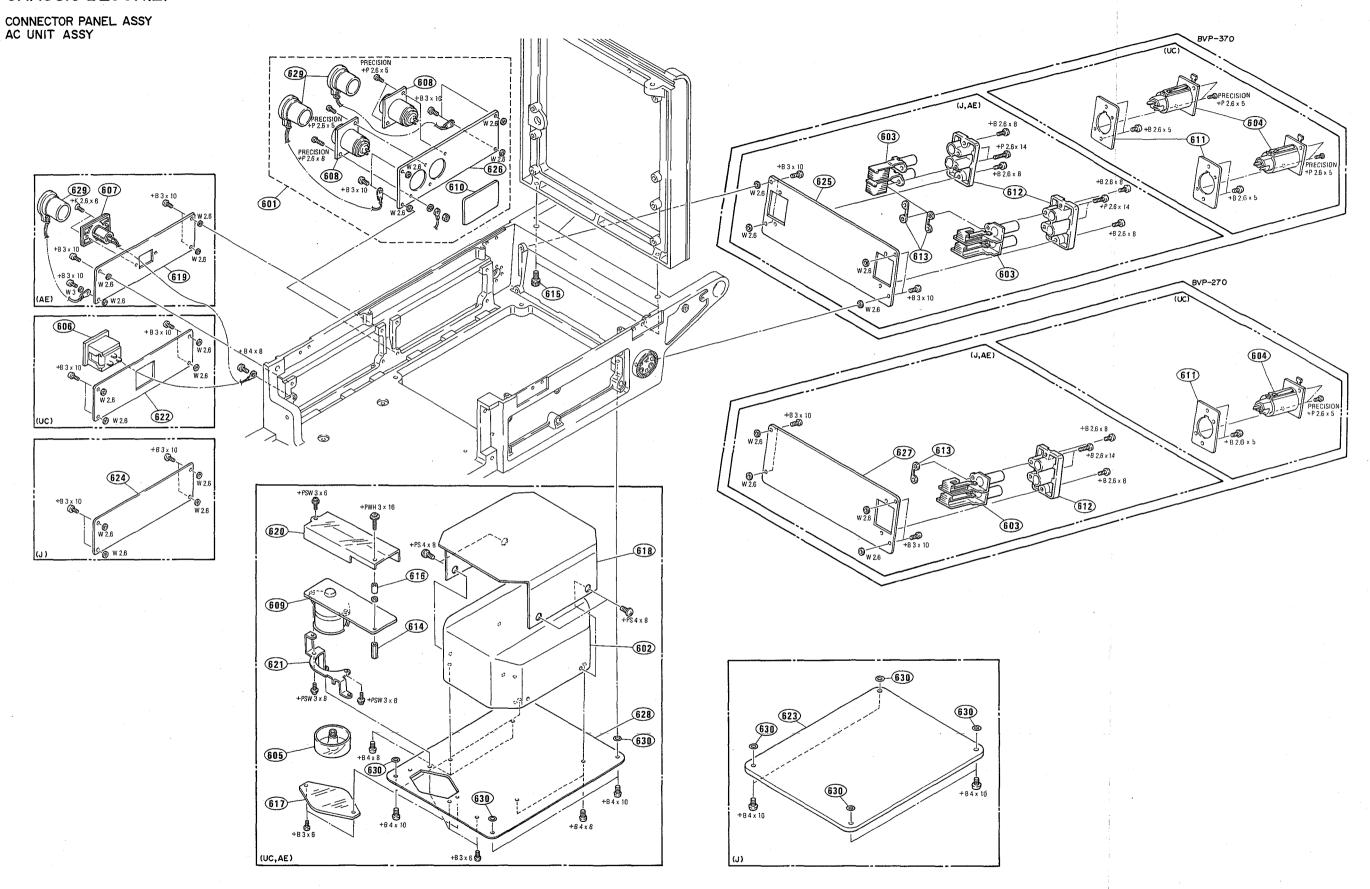
CHASSIS BLOCK (1)

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Part No.
                                                                                   SP Description
No.
                            A-7515-063-A O MOUNTED CIRCUIT BOARD, PS-192
A-7515-064-A O MOUNTED CIRCUIT BOARD, VA-86

Ser. No BVP-370 Up To 10500 (UC) BVP-270 Up To 100 Up To 30400 (J) Up To 30500 Up To 40600 (AE) Up To 40600 (AE) Up To 40600 (AE) Up To 40600 (AE) Up To 40600 (AE) Up To 40601 - (UC) BVP-270 10401 - (UC) 30401 - (J) 30201 - (J) 40601 - (AE) 40101 - (AE) A-7515-065-A O MOUNTED CIRCUIT BOARD, IE-26 (BVP-370:J, UC) A-7515-066-A O MOUNTED CIRCUIT BOARD, IE-26P (BVP-370P:AE) A-7515-067-A O MOUNTED CIRCUIT BOARD, PR-130
501
502
                                                                                                                                                                                                                                         BVP-270 Up To 10400 (UC)
Up To 30200 (J)
Up To 40100 (AE)
 503
 504
                               A-7515-067-A o MOUNTED CIRCUIT BOARD, PR-130
 505
                             A-7515-068-A o MOUNTED CIRCUIT BOARD, MS-33 (BVP-370) Ser. No Up to 41125: BVP-370P(AE)
A-7515-322-A o MOUNTED CIRCUIT BOARD, MS-33P Ser. No 41201 -: BVP-370P(AE)
A-7515-069-A o MOUNTED CIRCUIT BOARD, SG-167 (BVP-370, BVP-270: J, UC)
A-7515-070-A o MOUNTED CIRCUIT BOARD, SG-167P (BVP-370P: AE)
A-7515-071-A o MOUNTED CIRCUIT BOARD, AU-129 (BVP-370: J, UC)
A-7515-072-A o MOUNTED CIRCUIT BOARD, AU-129P (BVP-370P: AE)
 506
 507
 508
 509
 510
                              A-7515-073-A o MOUNTED CIRCUIT BOARD, FL-89
A-7515-074-A o MOUNTED CIRCUIT BOARD, AT-54
A-7515-075-A o MOUNTED CIRCUIT BOARD, MD-67
A-7515-098-A o MOUNTED CIRCUIT BOARD, IE-26A
(BVP-270:J, UC)
A-7515-099-A o MOUNTED CIRCUIT BOARD, IE-26AP
(BVP-270P:AE)
 515
                              A-7515-100-A o MOUNTED CIRCUIT BOARD, MS-33A (BVP-270)
Ser. No. Up to 40210: BVP-270P(AE)
A-7515-323-A o MOUNTED CIRCUIT BOARD, MS-33AP
Ser. No. 40301 -: BVP-270P(AE)
A-7515-101-A o MOUNTED CIRCUIT BOARD, SG-167AP
(BVP-270P: AE)
A-7515-102-A o MOUNTED CIRCUIT BOARD, AU-129A
(RVP-270)
 516
 517
 518
                                                                                                                                                                                                          (BVP-270)
                               X-3740-803-1 o PLATE ASSY, SHIELD X-3740-807-1 o CHASSIS (B) ASSY
   520
                                                    5-400-11 o CABLE ASSY, RF
1-622-00 o LEVER, PC BOARD
1-520-21 s BOLT (M5X12), HOLE, HEXAGON
7-705-00 s BOLT (M4X40), HEXAGON HOLE
3-018-11 s SCREW, BLIND
                               3-676-125-00 o PIN, STOPPER
3-701-510-00 s SET SCREW, DOUBLE POINT 4X4
3-725-907-01 s BUSHING, BLIND (UC, AE)
X-3615-368-1 o FOOT, REAR ASSY (J)
X-3615-370-1 o FOOT (L), FRONT ASSY (J)
                               X-3615-369-1 o FOOT (R), FRONT ASSY (J)
3-740-815-01 o PIPE, HANDLE
3-173-303-01 o COVER, PIPE
3-740-817-01 o ESCUTCHEON, PIPE
3-740-825-01 o NUT, PLATE
                               3-740-847-01 o LID, POWER CASE
3-740-848-01 o CASE, POWER
3-740-858-01 o PARTITION (2)
3-740-859-01 o RAIL, PC BOARD
4-911-234-01 o EDGING
3-173-304-01 o RING, STOPPER
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CHASSIS BLOCK (2)

CHASSIS BLOCK(2)



SCREWS

Bz	+l Cz	
€ (
/ ─7-621-□	<u> </u>	/7-628- □
Size	Parts No.	Size
2 × 3	772-00	2 × 4
× 4	772-10	×5
× 5	772-20	×6
× 6	772-30	× 8
× 8	772-40	× 10
× 10	772-50	× 12
× 12	772-60	
× 14	772-70	0004
× 16	772-80	2.6 × 4
× 20		× 5 × 6
2.6 × 3	775-00	^ 8
×4	775-10	$\times 10$
×5	775-20	× 12
× 6	773-95	× 14
× 8	775-40	× 16
× 10	775-50	× 20
× 12	775-60	
× 14	775-70	-
× 16	775-80	
× 20	775-90	

+PS Czn-N				
/ 7-628- <u>[</u>	00-00			
Size	Parts No.			
2 × 4	255-20			
× 5	283-00			
× 6	255-40			
× 8 × 10	255-50 283-10			
× 12	283-10 283-70			
2.6 × 4	284-00			
× 5	284-10			
× 6	284-20			
× 8	284-30			
× 10	284-40			
× 12	259-70			
× 14 × 16	259-80 260-00			
× 20	260-20			

		4 X 20	425-0
		4 x 25	427-0
		5 x 8	434-0
		5 x 10	435-0
		5 x 12	436-0
	25.	5 x 14	437-0
Cz	n-N	5 x 16	438-0
<u> </u>		5 x 20	440-0
		5 x 25	442-0
7 000 0		5 x 30	444-0
/— 7-682- 🗀		5 x 50	447-0
Size	Parts No.	6 x 10	452-0
		6 x 12	453-0
3 × 5	646-01	6 x 14	454-0
.×6	647-01	6 x 16	455-0
× 8	648-01	6 x 20	457-0
× 10	649-01	6 x 25	459-0
× 12	650-01	6 x 30	461-0
× 14	651-01	6 x 35	463-0
× 16	652-01	6 x 40	465-0
× 20	653-01	6 x 45	466-0
		6 x 55	468-0
4 × 6	660-01	8 x 12	470-0
× 8	661-01	8 x 14	471-0
× 10	662-01	8 x 16	472-0
× 12	663-01	8 x 20	473-0
× 14	664-01	8 x 25	474-0
× 16	665-01	8 x 30	475-0
× 20	666-01	8 x 35	476-0
		8 x 40	477-0
		8 x 45	478-0

O [,
7-683-□			/
SIZE	Parts No.		S
3 x 4	401-04		1
x 5	402-04		
× 6	403-04		
x 8	404-04		
x 10	405-04		
x 12	406-04		
x 14	407-04		
x 16	408-04		
x 20	410-04		
x 5	417-04		
x 6	418-04		
x 8	419-04		_
x 10	420-04		2
x 12	421-04		
x 14	422-04		
x 16	423-04		
x 20	425-04		
x 25	427-04		
x 8	434-04		
x 10	435-04		
x 12	436-04	ı	
x 14	437-04	ı 1	
x 16	438-04		
x 20	440-04		
x 25	442-04		
x 30	444-04		
x 50	447-04		2
x 10	452-04		
x 12	453-04	.	
x 14	454-04		
'x 16	455-04		
x 20	457-04		
x 25	459-04		
x 30	461-04		
x 35	463-04		
x 40	465-04		
x 45	466-04		
x 55	468-04		
x 12	470-04	Ī	

BOLT, HEXAGON

SOCKET

SNCM6 BZn-N4

SIZE

3 x 4

3 x 5

3 x 6

3 x 8

3 x 10

3 x 12

3 x 14

3 x 16

3 x 20

4 x 5

4 x 6

4 x 8

4 x 10

4 x 12

4 x 14

4 x 16

4 x 20

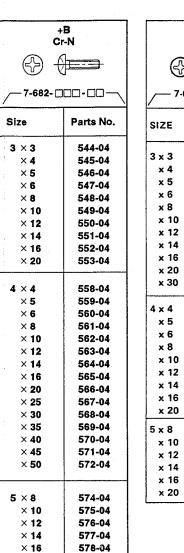
⊕ €		(
7-627-		7-627-	
SIZE	Parts No.	SIZE	Parts No.
1.7 x 1.6 x 1.8 x 2 x 2.2 x 2.5 x 2.8	552-18 552-28 552-08	1.7 x 1.6 x 1.8 x 2 x 2.2 x 2.5 x 2.8	 552-27 552-87 552-07
x 3 x 3.5 x 4 x 4.5 x 5 x 5,5 x 6	552-38 552-78 552-48 - 552-58 -	x 3 x 3.5 x 4 x 4.5 x 5 x 5.5 x 6	552-37 552-47 552-67 552-57 557-07 552-77
2 x 1.8 x 2 x 2.2 x 2.5 x 2.8 x 3 x 3.5 x 4 x 4.5 x 5 x 5 x 6 x 7 x 8 x 10	554-38 553-18 - 553-28 554-58 553-38 554-18 553-48 553-58 554-28 - 553-68 553-68 553-88 553-98 553-78	2 x 1.8 x 2 x 2.2 x 2.5 x 2.8 x 3 x 3.5 x 4 x 4.5 x 5 x 5.5 x 6 x 7 x 8 x 10	554-37 553-17 554-07 553-27 - 553-37 554-17 553-47 553-57 553-67 - 554-27 553-87 553-97 553-77
2.6 x 2.8 x 3 x 3.5 x 4 x 4.5 x 5 x 5.5 x 6 x 7 x 8 x 9 x 10	556-08 - 556-28 556-38 556-48 556-58 - 556-78 - -	2.6 x 2.8	556-07 556-37 556-57 556-77 556-97 557-47

PRECISION +P

Bzn-N

PRECISION +P

Cr-N



579-04

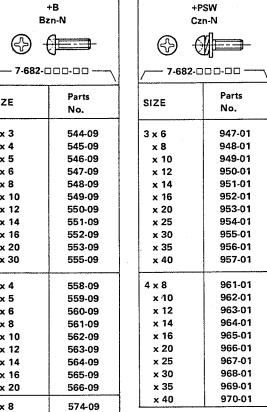
580-04

581-04

× 20

× 25

× 30

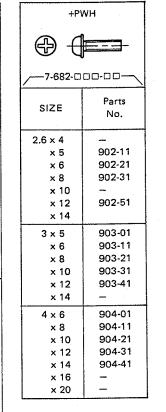


575-09

576-09

577-09

578-09 579-09



+K Cr-N				
/7-682- □	00-00			
SIZE	Parts No.			
3 x 4	245-04			
x 5	246-04			
x 6 247-04				
x 8	248-04			
x 10	249-04			
x 12	250-04			
x 14	251-04			
x 16	252-04			
x 20	253-04			
4 x 6	260-04			
* x 8	261-04			
x 10	262-04			
x 12	263-04			
x 14	264-04			
x 16	265-04			
x 20	266-04			



8 x 50

479-04

ELECTRICAL PARTS LIST

CAPACITOR, TANTALUM	CAPACITOR, CERAMIC, STACKED
Part No. SP Description	Part No. SP Description
1-131-396-00 s CAP, TANTALUM 0.01 20% 35V 1-131-397-00 s CAP, TANTALUM 0.015 20% 35V 1-131-398-00 s CAP, TANTALUM 0.022 20% 35V 1-131-399-00 s CAP, TANTALUM 0.033 20% 35V 1-131-400-00 s CAP, TANTALUM 0.047 20% 35V 1-131-401-00 s CAP, TANTALUM 0.068 10% 35V	1-162-757-11 s CAP, CERAMIC 220pF 5% 50V 1-162-762-11 s CAP, CERAMIC 560pF 5% 50V 1-162-764-11 s CAP, CERAMIC 820pF 5% 50V 1-162-765-11 s CAP, CERAMIC 0.001 5% 50V 1-162-769-11 s CAP, CERAMIC 0.0022 5% 50V
1-131-401-00 s CAP, TANTALUM 0.068 10% 35V 1-131-341-00 s CAP, TANTALUM 0.1 10% 35V 1-131-342-00 s CAP, TANTALUM 0.15 10% 35V 1-131-343-00 s CAP, TANTALUM 0.22 10% 35V 1-131-344-00 s CAP, TANTALUM 0.33 10% 35V	1-162-777-11 s CAP, CERAMIC 0.01 5% 50V 1-162-781-11 s CAP, CERAMIC 0.022-5%-50V 1-162-788-11 s CAP, CERAMIC 0.0033 10% 50V 1-162-790-11 s CAP, CERAMIC 0.0047 10% 50V 1-162-806-11 s CAP, CERAMIC 0.1 10% 50V
1-131-412-00 s CAP, TANTALUM 0.47 20% 20V 1-131-345-00 s CAP, TANTALUM 0.47 10% 35V 1-131-410-00 s CAP, TANTALUM 0.68 20% 25V 1-131-587-11 s CAP, TANTALUM 0.68 10% 35V 1-131-413-00 s CAP, TANTALUM 1.0 20% 20V	1-162-810-11 s CAP, CERAMIC 0.22 10% 50V 1-162-812-11 s CAP, CERAMIC 0.33 10% 50V
1-131-347-00 s CAP, TANTALUM 1.0 10% 35V 1-131-416-00 s CAP, TANTALUM 1.5 20% 16V 1-131-348-00 s CAP, TANTALUM 1.5 10% 35V 1-131-419-00 s CAP, TANTALUM 2.2 20% 10V 1-131-361-00 s CAP, TANTALUM 2.2 10% 20V	CAPACITOR, CERAMIC, STACKED Part No. SP Description
1-131-349-00 s CAP, TANTALUM 2.2 10% 35V 1-131-422-00 s CAP, TANTALUM 3.3 20% 6.3V 1-131-368-00 s CAP, TANTALUM 3.3 10% 16V 1-131-356-00 s CAP, TANTALUM 3.3 10% 25V 1-131-350-00 s CAP, TANTALUM 3.3 10% 35V	1-161-883-11 s CAP, CERAMIC 0.0015 50V 1-161-884-11 s CAP, CERAMIC 0.0022 50V 1-161-885-11 s CAP, CERAMIC 0.0033 50V 1-161-886-11 s CAP, CERAMIC 0.0047 50V 1-161-887-11 s CAP, CERAMIC 0.0068 50V
1-131-425-00 s CAP, TANTALUM 4.7 20% 3.15V 1-131-375-00 s CAP, TANTALUM 4.7 10% 10V 1-131-363-00 s CAP, TANTALUM 4.7 10% 20V 1-131-351-00 s CAP, TANTALUM 4.7 10% 35V 1-131-382-00 s CAP, TANTALUM 6.8 10% 6.3V	1-161-888-11 s CAP, CERAMIC 0.01 50V 1-161-889-11 s CAP, CERAMIC 0.015 50V 1-161-890-11 s CAP, CERAMIC 0.022 50V 1-161-891-11 s CAP, CERAMIC 0.033 50V 1-161-892-11 s CAP, CERAMIC 0.047 50V
1-131-370-00 s CAP, TANTALUM 6.8 10% 16V 1-131-358-00 s CAP, TANTALUM 6.8 10% 25V 1-131-352-00 s CAP, TANTALUM 6.8 10% 35V 1-131-389-00 s CAP, TANTALUM 10 10% 3.15V 1-131-377-00 s CAP, TANTALUM 10 10% 10V	1-161-893-11 s CAP, CERAMIC 0.068 50V 1-161-485-00 s CAP, CERAMIC 0.1 50V 1-161-895-11 s CAP, CERAMIC 0.15 50V 1-161-896-11 s CAP, CERAMIC 0.22 50V 1-161-897-11 s CAP, CERAMIC 0.33 50V
1-131-365-00 s CAP, TANTALUM 10 10% 20V 1-131-353-00 s CAP, TANTALUM 10 10% 35V 1-131-384-00 s CAP, TANTALUM 15 10% 6.3V 1-131-372-00 s CAP, TANTALUM 15 10% 16V 1-131-360*00 s CAP, TANTALUM 15 10% 25V	1-161-898-11 s CAP, CERAMIC 0.47 50V 1-161-899-11 s CAP, CERAMIC 0.68 50V 1-161-900-11 s CAP, CERAMIC 1.0 50V
1-131-391-00 s CAP, TANTALUM 22 10% 3.15V 1-131-379-00 s CAP, TANTALUM 22 10% 10V 1-131-367-00 s CAP, TANTALUM 22 10% 20V 1-131-386-00 s CAP, TANTALUM 33 10% 6.3V 1-131-374-00 s CAP, TANTALUM 33 10% 16V	
1-131-393-00 s CAP, TANTALUM 47 10% 3.15V 1-131-381-00 s CAP, TANTALUM 47 10% 10V 1-131-388-00 s CAP, TANTALUM 68 10% 6.3V 1-131-395-00 s CAP, TANTALUM 100 10% 3.15V	

CAPACITOR, CHIP CERAMIC

Part No. SP Description

1-163-083-00 1-163-085-00 1-163-087-00 1-163-089-00 1-163-091-00	s CAP, s CAP, s CAP, s CAP, s CAP,	CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC	1pF +-0.25 2pF +-0.25 4pF +-0.25 6pF +-0.5 8pF +-0.5	pF 50V pF 50V pF 50V
1-163-093-00 1-163-097-00 1-163-101-00 1-163-105-00 1-163-109-00	s CAP, s CAP, s CAP, s CAP, s CAP,	CHIP CERAMIC CHIP GERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC	-15pF - 5 22pF 5 33pF 5	5% 50V 5% 50V 5% 50V 5% 50V 5% 50V
1-163-113-00 1-163-117-00 1-163-121-00 1-163-125-00 1-163-129-00	s CAP, s CAP, s CAP, s CAP, s CAP,	CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC	100pF 150pF 220pF	5% 50V 5% 50V 5% 50V 5% 50V 5% 50V
1-163-133-00 1-163-137-00 1-163-141-00 1-163-145-00 1-164-161-11	s CAP, s CAP, s CAP, s CAP, s CAP,	CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC	680pF 1000pF 1500pF 10	5% 50V 5% 50V 5% 50V 0% 50V 0% 100V
1-164-182-11 1-163-017-00 1-163-019-00 1-164-232-11 1-163-023-00	s CAP, s CAP, s CAP, s CAP, s CAP,	CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC	4700pF 10 6800pF 10 0.01 20	0% 100V 0% 50V 0% 50V 0% 100V 0% 50V
1-163-034-00 1-163-035-00 1-163-036-00 1-163-038-00	s CAP, s CAP, s CAP, s CAP,	CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC	0.033 0.047 0.068 0.1	50V 50V 50V 50V

INDUCTOR, MICRO

Part No. SP Description

1-4 1-4 1-4 1-4 1-4	08- 08- 08-	-87 -87 -87	7- 8- 9-	00 00 21	\$ \$ \$ \$ \$	INDU INDU INDU	CTOR, CTOR, CTOR, CTOR, CTOR,	MIC MIC MIC MIC MIC	RO RO RO	0.18 0.22 0.33 0.47 0.56	5% 5% 5% 5%
1-4 1-4 1-4 1-4	08- 08- 08-	76 39 39	13- 17- 18-	00 00 00	2 2 2 2	INDU Indu Indu	CTOR, CTOR, CTOR, CTOR, CTOR,	MIC MIC MIC MIC	RO RO RO	0.68 0.82 1.0 1.2 1.5	5% 5% 5% 5% 5%
1-4 1-4 1-4 1-4	08- 08- 08-	-40 -40 -40	11- 12- 13-	00 00 00	2 2 2 2 3	INDU INDU INDU	CTOR, CTOR, CTOR, CTOR, CTOR,	MIC MIC MIC	RO RO RO	1.8 2.2 2.7 3.3 3.9	5% 5% 5% 5% 5%
1-4 1-4 1-4 1-4 1-4	08- 08- 08-	-40 -40 -40	16- 17- 18-	00	\$ \$ \$ \$	INDU Indu Indu	CTOR, CTOR, CTOR, CTOR,	MIC MIC MIC	RO RO RO	4.7 5.6 6.8 8.2 10	5% 5% 5% 5% 5%
1-4 1-4 1-4 1-4	08- 08- 08-	-41 -41 -41	1- 2- 3-	.00 .00	S S S	INDU Indu Indu	CTOR, CTOR, CTOR, CTOR,	MIC MIC MIC	RO RO RO	12 15 18 22 27	5% 5% 5% 5% 5%
1-4 1-4 1-4 1-4	08- 08- 08-	-4] -4] -4]	6- 7- 8-	·00 ·21 ·00	\$ \$ \$ \$	INDU Indu Indu	CTOR, CTOR, CTOR, CTOR,	MIC MIC MIC	RO RO RO	33 39 47 56 68	5% 5% 5% 5% 5%
1-4 1-4 1-4 1-4 1-4	08- 08- 08-	-42 -42 -42	21- 22- 23-	.00 .00	\$ \$ \$ \$	INDU INDU INDU	CTOR CTOR CTOR CTOR CTOR	MIC MIC MIC	RO RO RO	82 100 120 150 180	5% 5% 5% 5% 5%
1-4 1-4 1-4 1-4	08- 08- 08-	-42 -42 -42	26- 27- 28-	.00 .00	\$ \$ \$ \$	INDU Indu Indu	CTOR, CTOR, CTOR, CTOR,	MIC MIC MIC	RO RO RO	220 270 330 390 470	5% 5% 5% 5%

RESISTOR, CHIP

Part No.

1-216-295-00 s RES, CHIP 0 1-216-298-00 s RES, CHIP 2.2 1-216-302-00 s RES, CHIP 2.7 1-216-304-11 s RES, CHIP 3.3 1-216-306-11 s RES, CHIP 3.9 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 1-216-308-00 s RES, CHIP 1-216-309-00 s RES, CHIP 1-216-311-00 s RES, CHIP 1-216-313-00 s RES, CHIP 1-216-001-00 s RES, CHIP 4.7 5.6 6.8 8.2 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 10 1-216-003-11 s RES, CHIP 1-216-005-00 s RES, CHIP 1-216-007-00 s RES, CHIP 1-216-009-00 s RES, CHIP 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 12 15 18 22 1-216-011-00 s RES, CHIP 5% 1/10W 5% 1/10W 39 47 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 1-216-023-00 s RES, 1-216-025-00 s RES, CHIP 1-216-027-00 s RES, CHIP 1-216-029-00 s RES, CHIP 1-216-031-00 s RES, CHIP 5% 1/10W 5% 1/10W 5% 1/10W 100 120 150 1-216-033-00 s RES, CHIP 1-216-035-00 s RES, CHIP 1-216-037-00 s RES, CHIP 1-216-039-00 s RES, CHIP 1-216-041-00 s RES, CHIP 220 270 330 5% 1/10W 5% 1/10W 5% 1/10W

1-216-043-00 s RES, CHIP 1-216-045-00 s RES, CHIP 1-216-047-00 s RES, CHIP 1-216-049-00 s RES, CHIP 1-216-051-00 s RES, CHIP

1-216-053-00 s RES, CHIP 1-216-055-00 s RES, CHIP 1-216-057-00 s RES, CHIP 1-216-059-00 s RES, CHIP 1-216-061#00 s RES, CHIP

1-216-063-00 s RES, CHIP 1-216-065-00 s RES, CHIP 1-216-067-00 s RES, CHIP 1-216-069-00 s RES, CHIP 1-216-071-00 s RES, CHIP

1-216-073-00 s RES, CHIP 1-216-075-00 s RES, CHIP 1-216-077-00 s RES, CHIP 1-216-079-00 s RES, CHIP 1-216-081-00 s RES, CHIP

1-216-083-00 s RES, CHIP 1-216-085-00 s RES, CHIP 1-216-748-11 s RES, CHIP 1-216-089-00 s RES, CHIP 1-216-091-00 s RES, CHIP 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W

1.2k 5% 1/10W

1.5k 5% 1/10W 1.8k 5% 1/10W 2.2k 5% 1/10W 2.7k 5% 1/10W 3.3k 5% 1/10W

3.9k 5% 1/10W 4.7k 5% 1/10W 5.6k 5% 1/10W 6.8k 5% 1/10W

> 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W

5% 1/10W 5% 1/10W 5% 1/10W

12k 15k 18k

27k 33k

39k 47k

SP Description

RESISTOR, CHIP

Part No.	SP	Desci	ription	1		
1-216-093-00 1-216-095-00 1-216-097-00 1-216-099-00 1-216-101-00	\$ \$ \$	RES, RES, RES, RES, RES,	CHIP CHIP CHIP CHIP CHIP	82k 100k 120k	5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W
1-216-103-00 1-216-105-00 1-216-107-00 1-216-109-00 1-216-111-00	S S S	RES, RES, RES, RES, RES,	CHIP CHIP CHIP CHIP CHIP	220k 270k 330k	5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W
1-216-113-00 1-216-115-00 1-216-117-00 1-216-119-00 1-216-121-00	S S S	RES, RES, RES, RES, RES,	CHIP CHIP CHIP CHIP CHIP	560k 680k 820k	5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W
1-216-123-11 1-216-125-00 1-216-127-11 1-216-129-00 1-216-131-11	2 S S		CHIP CHIP CHIP CHIP CHIP	1.5M 1.8M 2.2M	5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W
1-216-133-00	s	RES,	CHIP	3.3M	5%	1/10W

RESISTOR, CARBON

Part No.	SP	Desc	ription	,-	
1-249-381-11 1-249-382-11 1-249-383-11 1-249-384-11 1-249-385-11	. S . S . S	RES, RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	1.0 1.2 1.5 1.8 2.2	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-386-11 1-249-387-11 1-249-388-11 1-249-389-11 1-249-390-11	\$ \$ \$	RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	2.7 3.3 3.9 4.7 5.6	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-391-11 1-249-392-11 1-249-393-11 1-249-394-11 1-249-395-11	L S L S L S	RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	6.8 8.2 10 12 15	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-396-1 1-249-397-1 1-249-398-1 1-249-399-1 1-249-400-1	ls ls ls	RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	18 22 27 33 39	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-401-1 1-249-402-1 1-249-403-1 1-215-394-00 1-249-404-1	l s l s) s	RES, RES, RES, RES, RES,	CARBON CARBON CARBON METAL CARBON	47 56 68 75 82	5% 1/6W 5% 1/6W 5% 1/6W 1% 1/6W 5% 1/6W
1-249-405-1 1-249-406-1 1-249-407-1 1-249-408-1 1-249-409-1	ls ls	RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	100 120 150 180 220	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-410-1 1-249-411-1 1-249-412-1 1-249-413-1 1-249-414-1	ls ls ls	RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	270 330 390 470 560	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-415-1 1-249-416-1 1-249-417-1 1-249-418-1 1-249-419-1	ls ls ls	RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	680 820 1.0k 1.2k 1.5k	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-420-1 1-249-421-1 1-249-422-1 1-249-423-1 1-249-424-1	ls ls ls	RES, RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	1.8k 2.2k 2.7k 3.3k 3.9k	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-425-1 1-249-426-1 1-249-427-1 1-249-428-1 1-249-429-1	ls ls ls	RES, RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	4.7k 5.6k 6.8k 8.2k 10k	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-430-1 1-249-431-1 1-249-432-1 1-249-433-1 1-249-434-1	ls ls ls	RES, RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	12k 15k 18k 22k 27k	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W
1-249-435-1 1-249-436-1 1-249-437-1 1-249-438-1 1-249-439-1	ls ls	RES, RES, RES, RES, RES,	CARBON CARBON CARBON CARBON CARBON	33k 39k 47k 56k 68k	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W

RESISTOR, CARBON

Part No.	SP	Description	
1-249-440-11	S	RES, CARBON	82k 5% 1/6W
1-249-441-11		RES, CARBON	100k 5% 1/6W
1-215-471-00		RES, METAL	120k 1% 1/6W
1-215-473-00		RES, METAL	150k 1% 1/6W
1-215-475-00		RES, METAL	180k 1% 1/6W
1-215-477-00 1-215-479-00 1-215-481-00 1-215-483-00 1-215-485-00	S S S	RES, METAL RES, METAL RES, METAL RES, METAL RES, METAL	220k 1% 1/6W 270k 1% 1/6W 330k 1% 1/6W 390k 1% 1/6W 470k 1% 1/6W
1-215-487-00	S	RES, METAL	560k 1% 1/6W
1-215-489-00		RES, METAL	680k 1% 1/6W
1-215-491-00		RES, METAL	820k 1% 1/6W
1-215-493-00		RES, METAL	1.0M 1% 1/6W

AT-54 BOARD			(AT-54 BC	DÁRD)
Ref. No. or Q ty Pa	rt No. SP Description		Ref. No. or Q'ty	Part No. SP Description
1pc 2 1pc 7 2pcs 7	7515-074-A o MOUNTED CIRCUIT BOARD, A 251-622-00 o LEVER, PC BOARD 626-317-11 s PIN, SPRING 2:5X6 628-254-40 s SCREW +PS 2.6X12 682-902-01 s SCREW +PWH 2.6X4	T-54	IC27 IC28 IC29 IC30 IC31	8-759-204-59 s IC TC40H138F 8-759-246-66 s IC TMPZ84C015BF-6 8-759-204-59 s IC TC40H138F 8-759-737-83 s IC 27C256A-BVP370-1.21 8-759-234-55 s IC TC5564AFL-15
C62 1- C77 1- C101 1-	-124-584-00 s ELECT 100uF 20% 10V -163-103-00 s CERAMIC CHIP 27PF 5% 50V -125-446-11 s DOUBLE LAYERS 0.47FARAD -163-127-00 s CERAMIC CHIP 270PF 5% 50 -163-127-00 s CERAMIC CHIP 270PF 5% 50	5.5V)V	IC32 IC33 IC34 IC35 IC36	$\begin{array}{l} 8-759-994-64 & \text{s} \text{IC} \text{MB88341PF} \\ 8-759-748-05 & \text{s} \text{IC} \text{UPD28C64C-20} \\ 8-759-204-83 & \text{s} \text{IC} \text{TC40H245F} \\ 8-759-147-83 & \text{s} \text{IC} \text{CXD8071Q} \\ 8-759-910-35 & \text{s} \text{IC} \text{MSM82C55A-5GS} \\ \end{array}$
C103 1- C104 1- C105 1- C106 1- C107 1-	-163-127-00 s CERAMIC CHIP 270PF 5% 50 -163-127-00 s CERAMIC CHIP 270PF 5% 50) V) V) V) V	IC37 IC38 IC39 IC40 IC41	8-759-204-90 s IC TC40H374F 8-759-204-83 s IC TC40H245F 8-759-204-82 s IC TC40H244F 8-759-204-71 s IC TC40H163F 8-759-973-83 s IC MSM80C49-793GS-K
D1 8- D2 8- D3 8-	-562-730-11 o CONNECTOR, MULTI 90P, MA -719-921-12 s DIODE HZZBLL -719-118-38 s DIODE 15Z46A -719-101-61 s DIODE RD6, 2EL2 -719-101-64 s DIODE RD6, 8EL2 -719-800-76 s DIODE 1SS226	ALE	IC42 IC43 IC44 IC45 IC46	8-759-102-82 s IC UPD82C43G 8-759-204-71 s IC TC40H163F 8-759-204-71 s IC TC40H163F 8-759-204-71 s IC TC40H163F 8-759-009-04 s IC MC14050BF
D6 8- D7 8- D8 8-	-719-104-31 s DIODE 1S2838 -719-101-58 s DIODE RD5.6EL2 -719-800-76 s DIODE 1SS226 -719-948-47 s DIODE HSM88AS		IC47 IC48 IC49 IC50 IC51	8-759-009-04 s IC MC14050BF 8-759-201-61 s IC TC40H004F 8-759-201-53 s IC TC40H000F 8-759-204-40 s IC TC40H027F 8-759-201-63 s IC TC40H032F
D10 8- D11 8- D13 8- D14 8-	-719-800-76 s DIODE ISS226 -719-104-34 s DIODE IS2836 -719-101-97 s DIODE ISS97-1 -719-800-76 s DIODE ISS226 -719-104-34 s DIODE IS2836		IC52 IC53 IC54 IC55 IC56	8-759-925-90 s IC SN74HC74NS 8-759-201-61 s IC TC40H004F 8-759-201-61 s IC TC40H004F 8-759-209-69 s IC TC4S11F 8-759-201-60 s IC TC40H002F
D16 8-	-719-948-47 s DIODE HSM88AS -719-800-76 s DIODE 1SS226 -719-800-76 s DIODE 1SS226		IC57 IC58 IC59	8-759-906-53 s IC TL062CPS 8-759-209-57 s IC TC4S59F 8-759-100-93 s IC UPC393G2
IC1 8- IC3 8- IC4 8- IC5 8-	-759-906-54 s IC TL064CNS -759-201-61 s IC TC40H004F -759-009-07 s IC MC14053BF -759-009-07 s IC MC14053BF -759-906-53 s IC TL062CPS		Q1 Q2 Q3 Q4 Q5	8-729-105-29 s TRANSISTOR 2SA1385 8-729-105-29 s TRANSISTOR 2SA1385 8-729-105-19 s TRANSISTOR 2SC3518 8-729-101-25 s TRANSISTOR 2SC1009A 8-729-101-25 s TRANSISTOR 2SC1009A
IC7 8- IC8 8- IC9 8- IC10 8-	-759-906-54 s IC TL064CNS -759-009-07 s IC MC14053BF -759-906-54 s IC TL064CNS -759-906-54 s IC TL064CNS -759-204-71 s IC TC40H163F		Q6 Q7 Q8 Q9 Q10	8-729-101-25 s TRANSISTOR 2SC1009A 8-729-122-63 s TRANSISTOR 2SA1226 8-729-175-72 s TRANSISTOR 2SC2757 8-729-175-72 s TRANSISTOR 2SC2757 8-729-175-72 s TRANSISTOR 2SC2757
IC12 8- IC13 8- IC14 8- IC15 8-	-759-204-71 s IC TC40H163F -759-201-64 s IC TC40H074F -759-204-69 s IC TC40H161F -759-239-34 s IC TC74HC4538AF -759-009-02 s IC MC14046BF		Q11 Q12 Q13 Q14 Q15	8-729-175-72 s TRANSISTOR 2SC2757 8-729-101-25 s TRANSISTOR 2SC1009A 8-729-101-25 s TRANSISTOR 2SC1009A 8-729-101-25 s TRANSISTOR 2SC1009A 8-729-101-25 s TRANSISTOR 2SC1009A
IC17 8- IC18 8- IC19 8- IC20 8-	-759-204-71 s IC TC40H163F -759-735-88 s IC 27C512G-20-P370 -759-204-75 s IC TC40H175F -759-402-31 s IC MN1237A -759-204-90 s IC TC40H374F		016 017 018 019 020	8-729-101-25 s TRANSISTOR 2SC1009A 8-729-122-63 s TRANSISTOR 2SA1226 8-729-109-44 s TRANSISTOR 2SK94 8-729-109-44 s TRANSISTOR 2SK94 8-729-101-25 s TRANSISTOR 2SC1009A
IC22 8- IC23 8- IC24 8- IC25 8-	-759-201-64 s IC TC40H074F -759-106-58 s IC UPD7004C -759-910-35 s IC MSM82C55A-5GS -759-910-35 s IC MSM82C55A-5GS -759-918-65 s IC TL7700CPS		Q21 Q22 Q23 Q24 Q25	8-729-101-25 s TRANSISTOR 2SC1009A 8-729-101-25 s TRANSISTOR 2SC1009A 8-729-101-25 s TRANSISTOR 2SC1009A 8-729-100-66 s TRANSISTOR 2SC1623 8-729-122-63 s TRANSISTOR 2SA1226

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Ref. No. or Q'ty	Part No. SP Description
Q26 Q27 Q28 Q29 Q30	8-729-101-25 s TRANSISTOR 2SC1009A 8-729-109-44 s TRANSISTOR 2SK94 8-729-100-66 s TRANSISTOR 2SC1623 8-729-101-25 s TRANSISTOR 2SC1009A 8-729-101-25 s TRANSISTOR 2SC1009A
Q31 Q32 Q33 Q35 Q36	8-729-101-25 s TRANSISTOR 2SC1009A 8-729-101-25 s TRANSISTOR 2SC1009A 8-729-216-22 s TRANSISTOR 2SA1162 8-729-100-66 s TRANSISTOR 2SC1623 8-729-122-63 s TRANSISTOR 2SA1226
037 038 039 040	8-729-122-63 s TRANSISTOR 2SA1226 8-729-100-66 s TRANSISTOR 2SC1623 8-729-807-87 s TRANSISTOR 2SB1295-UL6 8-729-100-66 s TRANSISTOR 2SC1623
R1 R2 R3 R4 R5	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
R6 R7 R8 R9 R10	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R23 R24 R25 R27 R37	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-649-11 s METAL CHIP 820 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R38 R39 R40 R48 R49	1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-636-11 s METAL CHIP 240 0.50% 1/10W 1-216-643-11 s METAL CHIP 470 0.50% 1/10W 1-216-643-11 s METAL CHIP 470 0.50% 1/10W
R50 R51 R52 R53 R59	1-216-653-11 s METAL CHIP 1.2K 0.50% 1/10W 1-216-643-11 s METAL CHIP 470 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-635-11 s METAL CHIP 220 0.50% 1/10W
R64 R65 R66 R76 R78	1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W
R79 R80 R81 R82 R84	1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-639-11 s METAL CHIP 330 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R88 R95 R96 R97 R125	1-216-682-11 s METAL CHIP 20K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-641-11 s METAL CHIP 390 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R132 R133 R134 R135 R136	1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W

(AT-54 BOARD)

Ref. No. or Q'ty	Part No. SP Description
R137 R142 R328 R356 R357	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-624-11 s METAL CHIP 75 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W
R359	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
RP1	1-232-509-00 s COMPOSITION CIRCUIT BLOCK
RV2 RV3	1-228-456-00 s RES. ADJ, METAL 1K 1-228-475-00 s RES. ADJ, METAL 20K 1-228-472-00 s RES. ADJ, METAL 2K 1-228-460-00 s RES. ADJ, METAL 20K 1-228-463-00 s RES. ADJ, METAL 20K
RV6	1-228-457-00 s RES, ADJ, METAL 2K
S1 S2	1-553-564-00 s SWITCH, ROTARY 1-572-222-11 s SWITCH, TOGGLE
X1	152794100 s VIBRATOR, CRYSTAL 10.944MHz

AU-129P BOARD (AU-129P BOARD)			
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description		
1pc A-7515-072-A o MOUNTED CIRCUIT BOARD, AU-129P 1pc 2-251-622-00 o LEVER, PC BOARD 1pc 7-626-317-11 s PIN, SPRING 2.5X6 2pcs 7-628-254-40 s SCREW +PS 2.6X12 4pcs 7-682-902-01 s SCREW +PWH 2.6X4	CF1 1-578-066-11 s FILTER, CERAMIC 4.3MHz CF2 1-578-066-11 s FILTER, CERAMIC 4.3MHz CF3 1-577-203-11 s FILTER, CERAMIC 3.6MHz CF4 1-577-203-11 s FILTER, CERAMIC 3.6MHz CF5 1-577-204-11 s FILTER, CERAMIC 3.9MHz		
C15	CF6 1-577-204-11 s FILTER, CERAMIC 3.9MHz CF7 1-578-068-12 s FILTER, CERAMIC 7.1MHz CF8 1-578-069-11 s FILTER, CERAMIC 7.4MHz CF9 1-567-100-00 s FILTER, CERAMIC 6.0MH7. CF10 1-578-067-11 s FILTER, CERAMIC 6.7MHz		
C34 1-101-361-00 s CERAMIC 39PF 5% 50V C35 1-102-973-00 s CERAMIC 100PF 5% 50V C39 1-163-124-00 s CERAMIC 200PF 5% 50V C46 1-124-584-00 s ELECT 100uF 20% 10V C52 1-163-127-00 s CERAMIC CHIP 270PF 5% 50V	CP1 1-464-758-11 s CONVERTER, DC-DC (CD-54)		
C53	D1 8-719-101-41 s DIODE RD3. 9EL2 D2 8-719-118-38 s DIODE 1SZ46A D3 8-719-101-97 s DIODE 1SS97-1 D4 8-719-104-34 s DIODE 1SZ836 D5 8-719-101-33 s DIODE RD2. 7EL2		
C83	D6 8-719-800-76 s DIODE 1SS226 D7 8-719-913-44 s DIODE ERA82-004 D8 8-719-800-76 s DIODE 1SS226 D9 8-719-913-44 s DIODE ERA82-004 D10 8-719-101-58 s DIODE RD5. 6EL2		
C119 1-163-115-00 s CERAMIC CHIP 82PF 5% 50V C124 1-127-518-11 s ELECT(SOLID) 100uF 20% 16V C126 1-124-584-00 s ELECT 100uF 20% 10V C145 1-163-131-00 s CERAMIC CHIP 390PF 5% 50V C147 1-101-884-00 s CERAMIC 56PF 5% 50V			
C148 1-101-884-00 s CERAMIC 56PF 5% 50V C150 1-163-119-00 s CERAMIC CHIP 120PF 5% 50V C157 1-124-292-00 s ELECT 33uF 20% 6.3V C171 1-163-131-00 s CERAMIC CHIP 390PF 5% 50V C173 1-102-816-00 s CERAMIC 120PF 5% 50V	D19 8-719-104-31 s DIODE 1S2838 D20 8-719-104-34 s DIODE 1S2836 D21 8-719-949-35 s DIODE FC53M-6 D22 8-719-800-76 s DIODE 1SS226 D23 8-719-101-67 s DIODE RD7. 5E-L2		
C176	D24 8-719-104-31 s DIODE 1S2838 D25 8-719-104-34 s DIODE 1S2836 D26 8-719-949-35 s DIODE FC53M-6 D27 8-719-800-76 s DIODE 1SS226 D28 8-719-104-34 s DIODE 1S2836		
C206 1-124-292-00 s ELECT 33uF 20% 6.3V C208 1-124-499-11 s ELECT 1uF 20% 50V C209 1-124-499-11 s ELECT 1uF 20% 50V C210 1-126-163-11 s ELECT 4.7uF 20% 50V C217 1-163-131-00 s CERAMIC CHIP 390PF 5% 50V	D29 8-719-104-34 s D10DE 1S2836 D30 8-719-949-35 s D10DE FC53M-6 D31 8-719-949-35 s D10DE FC53M-6 D32 8-719-104-34 s D10DE 1S2836 D33 8-719-104-31 s D10DE 1S2838		
C219	D34 8-719-104-31 s DIODE 1S2838 D35 8-719-104-31 s DIODE 1S2838 D36 8-719-104-31 s DIODE 1S2838 D37 8-719-104-31 s DIODE 1S2838 D38 8-719-104-34 s DIODE 1S2836		
C234 1-126-163-11 s ELECT 4.7uF 20% 50V C242 1-101-880-00 s CERAMIC 47PF 5% 50V C248 1-163-103-00 s CERAMIC CHIP 27PF 5% 50V C310 1-163-241-11 s CERAMIC CHIP 39PF 5% 50V C311 1-163-241-11 s CERAMIC CHIP 39PF 5% 50V	D39 8-719-104-34 s DIODE 1S2836 D40 8-719-949-35 s DIODE FC53M-6 D41 8-719-949-35 s DIODE FC53M-6 D42 8-719-104-34 s DIODE 1S2836 D43 8-719-104-31 s DIODE 1S2838		
C312 1-163-241-11 s CERAMIC CHIP 39PF 5% 50V C313 1-163-241-11 s CERAMIC CHIP 39PF 5% 50V C314 1-163-241-11 s CERAMIC CHIP 39PF 5% 50V	D44 8-719-104-31 s DIODE 1S2838 D45 8-719-104-31 s DIODE 1S2838 D46 8-719-104-31 s DIODE 1S2838 D47 8-719-104-31 s DIODE 1S2838		

(AU-129P	BOARD)	(AU-129P	BOARD)
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description
D48 D49	8-719-104-34 s DIODE 1S2836 8-719-104-34 s DIODE 1S2836	LV5 LV6 LV7	1-459-888-11 s COIL, VARIABLE 1-459-888-11 s COIL, VARIABLE 1-459-890-11 s COIL, VARIABLE
FL1 FL2 FL3	1-236-638-11 s BAND PASS 2.9MHz 1-236-639-11 s BAND PASS 2.5MHz 1-236-637-11 s LPF	Q1 Q2 Q3 Q4 Q5	8-729-105-29 s TRANSISTOR 2SA1385 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162
IC1 IC2 IC3 IC4	8-759-906-53 s IC TL062CPS 8-759-908-17 s IC TL082CPS 8-759-201-36 s IC TA7303P 8-759-906-53 s IC TL062CPS 8-759-201-36 s IC TA7303P		-8-729-100-66 s-TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-122-63 s TRANSISTOR 2SA1226 8-729-122-63 s TRANSISTOR 2SA1226
1C5 1C6 1C7	8-759-981-86 s IC RC4556MA 8-759-324-12 s IC HA12412	Q6 Q7 Q8 Q9 Q10	8-729-216-22 s TRANSISTOR 23A1162 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162
IC8 IC9 IC10	8-759-981-86 s IC RC4556MA 8-759-981-86 s IC RC4556MA 8-759-324-12 s IC HA12412	Q11 Q12 Q13	8-729-122-63 s TRANSISTOR 2SA1226 8-729-122-63 s TRANSISTOR 2SA1226 8-729-100-66 s TRANSISTOR 2SC1623
IC11 IC12 IC13	8-759-981-86 s IC RC4556MA 8-759-324-12 s IC HA12412 8-759-981-86 s IC RC4556MA 8-759-981-92 s IC RC4558M	Q14 Q15 Q16	8-729-126-22 s TRANSISTOR 2SA1162 8-729-122-63 s TRANSISTOR 2SA1226 8-729-122-63 s TRANSISTOR 2SA1226
IC14 IC15 IC16	8-759-981-92 s IC RC4558M 8-759-981-92 s IC RC4558M 8-759-981-92 s IC RC4558M 8-759-981-92 s IC RC4558M	017 018 019 020	8-729-100-66 s TRANSISTOR 2801623 8-729-216-22 s TRANSISTOR 28A1162 8-729-122-63 s TRANSISTOR 28A1226 8-729-122-63 s TRANSISTOR 28A1226
IC17 IC18 IC19 IC20	8-759-209-15 s IC TC4SU69F 8-759-147-84 s IC CXD8072Q 8-759-100-94 s IC UPC358G2	021 022 023	8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-122-63 s TRANSISTOR 2SA1226
IC21	8-759-100-94 s IC UPC358G2	024 025	8-729-122-63 s TRANSISTOR 2SA1226 8-729-200-87 s TRANSISTOR 2SC2714Y
JR1 JR2	1-217-666-11 s RES, SHORT 0.01 1/6w 1-217-666-11 s RES, SHORT 0.01 1/6w	026 027	8-729-122-63 s TRANSISTOR 2SA1226 8-729-122-63 s TRANSISTOR 2SA1226
L2 L3 L4	1-410-513-11 s MICRO 22uH 1-410-513-11 s MICRO 22uH 1-410-513-11 s MICRO 22uH 1-410-509-11 s MICRO 10uH 1-408-358-00 s INDUCTOR 100UH	Q28 Q29 Q30	8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-122-63 s TRANSISTOR 2SA1226 8-729-200-87 s TRANSISTOR 2SC2714Y
L5 L6 L7	1-408-358-00 s INDUCTOR 100UH 1-410-513-11 s MICRO 22uH 1-410-513-11 s MICRO 22uH	Q31 Q33 Q34 Q35	8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623
L8 L9 L10	1-408-358-00 s INDUCTOR 100UH 1-410-513-11 s MICRO 22uH	Q36 Q37	8-729-216-22 s TRANSISTOR 28A1162 8-729-109-44 s TRANSISTOR 28K94
L11 L12 L13 L14	1-410-513-11 s MICRO 22uH 1-410-509-11 s MICRO 10uH 1-408-358-00 s INDUCTOR 100UH 1-410-513-11 s MICRO 22uH	Q38 Q39 Q40 Q41	8-729-119-04 s TRANSISTOR 25C3115-D27 8-729-119-04 s TRANSISTOR 25C3115-D27 8-729-100-66 s TRANSISTOR 25C1623 8-729-200-87 s TRANSISTOR 25C2714Y
L15 L16	1-410-509-11 s MICRO 10uH 1-410-509-11 s MICRO 10uH	Q42 Q44	8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-100-66 s TRANSISTOR 2SC1623
L17 L18 L19	1-410-513-11 s MICRO 22uH 1-410-509-11 s MICRO 10uH 1-410-513-11 s MICRO 22uH 1-410-509-11 s MICRO 10uH	Q45 Q46 Q47	8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-109-44 s TRANSISTOR 2SK94
L20 L21	1-410-513-11 s MICRO 22uH 1-410-509-11 s MICRO 10uH	Q48 Q49 Q50	8-729-119-04 s TRANSISTOR 2SC3115-D27 8-729-119-04 s TRANSISTOR 2SC3115-D27 8-729-200-87 s TRANSISTOR 2SC2714Y
L22 L23 L24 L25	1-410-503-11 s MICRO 22uH 1-410-513-11 s MICRO 22uH 1-410-513-11 s MICRO 10uH 1-410-513-11 s MICRO 22uH	Q51 Q52 Q53	8-729-101-25 s TRANSISTOR 28C1003A 8-729-100-66 s TRANSISTOR 28C1623 8-729-100-66 s TRANSISTOR 28C1623
L26 LV1 LV2 LV3 LV4	1-459-891-11 s COIL, VARIABLE 1-459-892-11 s COIL, VARIABLE 1-459-888-11 s COIL, VARIABLE 1-459-888-11 s COIL, VARIABLE	Ö54 Ö55 Ö56 Ö57	8-729-216-22 s TRANSISTOR 28A1162 8-729-119-04 s TRANSISTOR 28C3115-D27 8-729-109-44 s TRANSISTOR 28K94 8-729-109-44 s TRANSISTOR 28K94

(AU-129P	BOARD)	(AU-129P	BOARD)
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description
Q58 Q59 Q60 Q61 Q62	8-729-109-44 s TRANSISTOR 2SK94 8-729-109-44 s TRANSISTOR 2SK94 8-729-119-04 s TRANSISTOR 2SC3115-D27 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-101-25 s TRANSISTOR 2SC1009A	R187 R188 R192 R194 R195	1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-680-11 s METAL CHIP 16K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-654-11 s METAL CHIP 1.3K 0.50% 1/10W
Q63 Q64 Q65 Q66 Q67	8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-119-04 s TRANSISTOR 2SC3115-D27 8-729-109-44 s TRANSISTOR 2SK94	R197 R198 R199 R201 R202	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W
Q68 Q69 Q70 Q71 Q72	8-729-109-44 s TRANSISTOR 2SK94 8-729-109-44 s TRANSISTOR 2SK94 8-729-109-44 s TRANSISTOR 2SK94 8-729-119-04 s TRANSISTOR 2SC3115-D27 8-729-200-87 s TRANSISTOR 2SC2714Y	R203 R213 R214 R215 R222	1-247-804-11 s CARBON 75 5% 1/4W 1-216-643-11 s METAL CHIP 470 0.50% 1/10W 1-216-648-11 s METAL CHIP 750 0.50% 1/10W 1-216-643-11 s METAL CHIP 470 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
Q73 Q74	8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623	R225 R226 R227	1-216-677-11 s METAL CHIP 12K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W
R3 R4	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W	R227 R228 R229	1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W
R4 R5 R6 R15	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W	R232 R233 R234	1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R16 R26	1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W	R235 R236	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R26 R27 R30 R32	1-210-071-11 s METAL CHIP 6.8K 0.50% 1/10W 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W	R242 R245 R246	1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W
R35 R51	1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-635-11 s METAL CHIP 220 0.50% 1/10W	R247 R248	1-216-641-11 s METAL CHIP 3.00 0.50% 1/10W 1-216-649-11 s METAL CHIP 390 0.50% 1/10W 1-216-649-11 s METAL CHIP 820 0.50% 1/10W
R54 R66 R67	1-216-635-11 s METAL CHIP 220 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W	R249 R250	1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1.216-667-11 s METAL CHIP 4.7K 0.50% 1/10W
R69 R74	1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W	R251 R253 R256	1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W
R75 R78 R83	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W	R257 R269 R270	1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-643-11 s METAL CHIP 470 0.50% 1/10W 1-216-641-11 s METAL CHIP 390 0.50% 1/10W
R86 R87	1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W	R271 R278	1-216-643-11 s METAL CHIP 470 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
R115 R116 R125	1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W	R281 R282 R283	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R126 R129	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W	R284 R285	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W
R134 R137 R138	1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-651-11 s METAL CHIP 100 0.50% 1/10W	R287 R288 R289	1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R140 R155 R156	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-687-11 c METAL CHIP 33K 0.50% 1/10W	R290 R291	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R164 R165	1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R297 R300 R301	1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W
R168 R173	1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W	R302 R303	1-216-641-11 s METAL CHIP 390 0.50% 1/10W 1-216-649-11 s METAL CHIP 820 0.50% 1/10W
R176 R177 R179	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W	R304 R305 R306	1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W
R185	1-247-883-00 s CARBON 150K 5% 1/4W	R306 R308	1-216-669-11 s METAL CHIP 5. 6K 0. 50% 1/10W

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Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description	
R311 R312 R316 R317 R318	1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-646-11 s METAL CHIP 620 0.50% 1/10W 1-216-646-11 s METAL CHIP 620 0.50% 1/10W 1-216-646-11 s METAL CHIP 620 0.50% 1/10W	R421 R423 R424 R426 R438	1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	
R325 R328 R329 R330 R333	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-644-11 s METAL CHIP 510 0.50% 1/10W	R439 R441 R442 R450 R451	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-635-11 s METAL CHIP 22O 0.50% 1/10W	
R334 R335	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W	R452 R453	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-635-11 s METAL CHIP 22O 0.50% 1/10W	
R336 R337 R339	1-216-682-11 s METAL CHIP 20K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W	RV1 RV2 RV3	1-228-457-00 s RES, ADJ, METAL 2K 1-228-460-00 s RES, ADJ, METAL 20K 1-228-460-00 s RES, ADJ, METAL 20K	
R341 R342	1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W 1-216-644-11 s METAL CHIP 510 0.50% 1/10W	RV4 RV5	1-228-460-00 s RES, ADJ, METAL 20K 1-228-459-00 s RES, ADJ, METAL 10K	
R344 R345 R346	1-216-653-11 s METAL CHIP 1.2K 0.50% 1/10W 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W	RV6 RV7 RV8	1-228-459-00 s RES, ADJ, METAL 10K 1-228-460-00 s RES, ADJ, METAL 20K 1-228-459-00 s RES, ADJ, METAL 10K	
R347 R348	1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W 1-216-690-11 s METAL CHIP 43K 0.50% 1/10W	RV9 RV10	1-228-460-00 s RES, ADJ, METAL 20K 1-228-459-00 s RES, ADJ, METAL 20K	
R353 R354 R355	1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W	RV11	1-228-459-00 s RES, ADJ, METAL 10K	
R357 R358 R359 R360 R365	1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-643-11 s METAL CHIP 4.7K 0.50% 1/10W	S1 S2 S3 S4 S5	1-570-134-11 s SWITCH, SLIDE 1-570-134-11 s SWITCH, SLIDE 1-570-857-11 s SWITCH, SLIDE 1-570-857-11 s SWITCH, SLIDE 1-570-857-11 s SWITCH, SLIDE	
R366 R367 R374 R377	1-216-643-11 s METAL CHIP 470 0.50% 1/10W 1-216-643-11 s METAL CHIP 470 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	\$6 \$7 \$8 \$9 \$10	1-571-395-11 s SWITCH, SLIDE 1-554-295-00 s SWITCH, SLIDE 1-571-395-11 s SWITCH, SLIDE 1-554-295-00 s SWITCH, SLIDE 1-570-610-11 s SWITCH, TOGGLE	
R378	I-SIO OOO II S HELME OHIL ZER O. OOM I/IOW	Т1	1-426-471-11 s. COII FM RECOVER	

(AU-129P BOARD)

CN-261 BOARD			
Ref. No. or Q'ty	Part No. SP	Description	
	1-626-818-11 o	PRINTED CIRCUIT BOARD,	CN-261
CN1	1-566-163-11 o	CONNECTOR, 5P	
S1	1-526-572-00 s	VOLTAGE SELECTOR	
	1-566-163-11 o	CONNECTOR, 5P	CN-

1-426-471-11 s COIL, FM RECOVER 1-426-469-11 s COIL, FM RECOVER 1-426-470-11 s COIL, FM RECOVER

1-567-153-00 s VIBRATOR, CRYSTAL 40KHz

R404 R405 R407 R408 R409

1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-644-11 s METAL CHIP 510 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W

1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W 1-216-644-11 s METAL CHIP 510 0.50% 1/10W

1-216-653-11 s METAL CHIP 1.2K 0.50% 1/10W 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W 1-216-690-11 s METAL CHIP 43K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W

1-216-689-11 s METAL CHIP 39K 0.50% 1/10W 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W

1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-646-11 s METAL CHIP 620 0.50% 1/10W 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W 1-216-646-11 s METAL CHIP 620 0.50% 1/10W

(AU-129P BOARD)

X1

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CN-451 BOARD
CN-375 BOARD
                                                                                                                          Ref. No. or Q'ty Part No.
Ref. No. or Q'ty Part No.
                                                                                                                                                                 SP Description
                                         SP Description
                                                                                                                                           1-633-551-11 o PRINTED CIRCUIT BOARD, CN-451
1-517-075-00 s SOCKET, LAMP
                  1-633-003-11 o PRINTED CIRCUIT BOARD, CN-375
                  1-135-166-21 s TANTALUM CHIP 47uF 10% 10V
1-135-166-21 s TANTALUM CHIP 47uF 10% 10V
1-124-119-00 s ELECT 33uF 20% 16V
1-124-119-00 s ELECT 33uF 20% 16V
1-124-119-00 s ELECT 33uF 20% 16V
C1
C2
C3
C4
                                                                                                                                           1-506-467-11 s CONNECTOR, 2P MALE
                                                                                                                          CN1
                                                                                                                                           1-518-411-00 s LAMP "TALLY"
                                                                                                                          PL101
 Č5
                  1-562-773-11 0 CONNECTOR, 40P, FEMALE
1-565-157-11 0 CONNECTOR, 10P, MALE
CN1
CN2
CN3
 CN4
                                                                                                                          EX-228 BOARD
 CN5
                                                                                                                          Ref. No. or Q'ty Part No.
                  1-565-157-11 o CONNECTOR, 10P, MALE
1-565-157-11 o CONNECTOR, 10P, MALE
                                                                                                                                                                  SP Description
 CN7
                  8-759-321-75 s IC HD74AC04P-R
8-759-321-75 s IC HD74AC04P-R
                                                                                                                                           A-7515-082-A o MOUNTED CIRCUIT BOARD, EX-228
                                                                                                                           1pc
                                                                                                                                           1\mbox{-}562\mbox{-}730\mbox{-}11 o CONNECTOR, MULTI 90P, MALE 1\mbox{-}562\mbox{-}876\mbox{-}11 o CONNECTOR, MULTI (L-J) 90P, FEMALE
                                                                                                                           CN2
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CN-390 BOARD

Ref. No. or Q'ty Part No. SP Description 1-632-985-11 o PRINTED CIRCUIT BOARD, CN-390 1-506-641-11 o CONNECTOR, 24P MALE 1-506-468-11 o CONNECTOR, 3P, MALE 1-506-468-11 o CONNECTOR, 3P, MALE 1-565-443-11 o CONNECTOR, 10P FEMALE "TRACKER" 1-562-222-00 s CONNECTOR, 6P FEMALE "RET CONTROL" CN1 CN2 CN3 CN4 CN5 1-506-467-11 o CONNECTOR, 2P, MALE 1-506-467-11 o CONNECTOR, 2P, MALE

CN-391 BOARD

Ref. No. or Q'ty Part No. SP Description 1-632-986-11 o PRINTED CIRCUIT BOARD, CN-391 1-506-623-11 o CONNECTOR, 16P, MALE CN1

FL-89 B0	ARD	(FL-89 BOARD)
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
1pc 1pc 1pc 2pcs 2pcs	A-7515-073-A o MOUNTED CIRCUIT BOARD, FL-89 2-251-622-00 o LEVER, PC BOARD 7-626-317-11 s PIN, SPRING 2.5X6 7-628-254-40 s SCREW +PS 2.6X12 7-682-545-04 s SCREW +B 3X4	R5 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R6 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W R7 1-216-623-11 s METAL CHIP 68 0.50% 1/10W R16 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R19 1-216-635-11 s METAL CHIP 220 0.50% 1/10W
4pcs	7-682-902-01 s SCREW +PWH 2.6X4	R20 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R21 1-216-637-11 s METAL CHIP 270 0.50% 1/10W
C13	1-102-936-00 s CERAMIC 3PF 0.5PF 50V	R20 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R21 1-216-637-11 s METAL CHIP 270 0.50% 1/10W R22 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R23 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R24 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W
CN1 CN2 CN3 CN4 CN5	1-562-730-11 o CONNECTOR, MULTI 90P, MALE 1-506-470-11 o CONNECTOR, 5P, MALE 1-569-170-11 o CONNECTOR, COAXIAL (SMALL TYPE) 1-569-170-11 o CONNECTOR, COAXIAL (SMALL TYPE) 1-569-170-11 o CONNECTOR, COAXIAL (SMALL TYPE)	R25 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R26 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R29 1-216-635-11 s METAL CHIP 220 0.50% 1/10W
CN6	1-569-170-11 o CONNECTOR, COAXIAL (SMALL TYPE)	R31 1-216-637-11 s METAL CHIP 270 0.50% 1/10W
D1 D2 D3 D4 D5	8-719-101-64 s DIODE RD6.8EL2 8-719-118-38 s DIODE ISZ46A 8-719-101-64 s DIODE RD6.8EL2 8-713-300-57 s DIODE 1T33 8-713-300-57 s DIODE 1T33	R32 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R33 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R34 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R35 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R38 1-216-635-11 s METAL CHIP 220 0.50% 1/10W
D6 D7 D8	8-713-300-57 s DIODE 1T33 8-713-300-57 s DIODE 1T33 8-719-104-31 s DIODE 1S2838	R39 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R40 1-216-637-11 s METAL CHIP 270 0.50% 1/10W R41 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R42 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R43 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W
FL1 FL2 FL3	1-426-476-12 s FILTER, MPX 1-236-272-11 s BAND PASS 70MHz 1-236-277-11 s LOW PASS 4MHz	R44 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W
IC1 IC2 IC3 IC4	8-759-906-53 s IC TL062CPS 8-759-927-85 s IC CA3102E-S 8-759-927-85 s IC CA3102E-S 8-752-032-63 s IC CXA1165M	R46 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R47 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R48 1-216-615-11 s METAL CHIP 33 0.50% 1/10W R49 1-216-615-11 s METAL CHIP 33 0.50% 1/10W
L5	1-410-322-11 s MICRO 3.3uH	R51 1-216-637-11 s METAL CHIP 270 0.50% 1/10W R52 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R53 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W
LV1 LV2	1-410-350-11 s MICRO 0.6uH 1-410-296-11 s MICRO 0.2uH	R54 1-216-669-11 s METAL CHIP 5. 6K 0. 50% 1/10W R55 1-216-669-11 s METAL CHIP 5. 6K 0. 50% 1/10W
Q1 Q2 Q3 Q4 Q5	8-729-105-29 s TRANSISTOR 2SA1385 8-729-105-19 s TRANSISTOR 2SC3518 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-175-73 s TRANSISTOR 2SC2757	R67 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R68 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R69 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R71 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W R72 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W
Q6 Q7 Q8 Q9 Q10	8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757	R74 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R75 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R76 1-216-671-11 s METAL CHIP 8.2K 0.50% 1/10W R83 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R84 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W
Q11 Q12	8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757	R85 1-216-619-11 s METAL CHIP 47 0.50% 1/10W
011 012 013 014 015	8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757	RV1 1-228-457-00 s RES, ADJ, METAL 2K RV2 1-228-455-00 s RES, ADJ, METAL 500 RV3 1-228-459-00 s RES, ADJ, METAL 10K RV4 1-228-459-00 s RES, ADJ, METAL 10K
Q16 Q17 Q18 Q19 Q20	8-729-100-66 s TRANSISTOR 2SC1623 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162	NIT 1 220 TOO VV S NED, RUO, NEIRE IVN
Q21	8-729-216-22 s TRANSISTOR 2SA1162	
R3 R4	1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	

IE-26P BOARD		(IE-26P	BOÅRD)
Ref. No.	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description
lpc lpc 8pcs lpc 2pcs	A-7515-066-A o MOUNTED CIRCUIT BOARD, IE-26P 2-251-622-00 o LEVER, PC BOARD 3-621-124-00 o SPACER 7-626-317-11 s PIN, SPRING 2.5X6 7-628-254-40 s SCREW +PS 2.6X12	IC12 IC13 IC14 IC15 IC16	1-807-416-11 s IC BH-1211 8-759-906-53 s IC TL062CPS 8-759-906-53 s IC TL062CPS 8-759-981-51 s IC RC1496M 8-759-147-84 s IC CXD8072Q
4pcs	7-682-902-01 s SCREW +PWH 2.6X4	IC17 IC18	8-759-994-64 s-1C-MB88341PF- 8-759-906-54 s 1C TL064CNS
C20 C93 C113 C115 C163	1-163-086-00 s CERAMIC CHIP 3PF 0.25PF 50V 1-163-086-00 s CERAMIC CHIP 3PF 0.25PF 50V 1-163-088-00 s CERAMIC CHIP 5PF 0.25PF 50V 1-163-088-00 s CERAMIC CHIP 5PF 0.25PF 50V 1-128-283-11 s ELECT 100MF 20% 6.3V	L6 L19 L28	1-410-509-11 s MICRO 10uH 1-410-509-11 s MICRO 10uH 1-410-522-11 s INDUCTOR 120UH
C206 C211 C212 C213 C214	1-163-135-00 s CERAMIC CHIP 560PF 5% 50V 1-163-088-00 s CERAMIC CHIP 5PF 0.25PF 50V 1-163-088-00 s CERAMIC CHIP 5PF 0.25PF 50V 1-163-088-00 s CERAMIC CHIP 5PF 0.25PF 50V 1-163-088-00 s CERAMIC CHIP 5P 0.25PF 50V	Q1 Q2 Q3 Q4 Q5	8-729-105-29 s TRANSISTOR 2SA1385 8-729-105-29 s TRANSISTOR 2SA1385 8-729-105-19 s TRANSISTOR 2SC3518 8-729-216-22 s TRANSISTOR 2SA1162 8-729-100-66 s TRANSISTOR 2SC1623
C214 C215 C218 CN1	1-163-088-00 s CERAMIC CHIP 5P 0.25PF 50V 1-128-283-11 s ELECT 100MF 20% 6.3V 1-562-730-11 o CONNECTOR, MULTI 90P, MALE	Q6 Q7 Q8 Q9 Q10	8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-200-87 s TRANSISTOR 2SC2714Y 8-765-930-08 s TRANSISTOR 3SK163-2 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-200-87 s TRANSISTOR 2SC2714Y
CP1	1-809-110-21 s PC BOARD, MATRIX(MX-2)	Q11 Q12	8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757
CV1 CV4	1-141-299-11 s CERAMIC TRIMMER 6P 1-141-299-11 s CERAMIC TRIMMER 6P	Q13 Q14 Q15	8-729-175-73 s TRANSISTOR 25C2757 8-729-200-87 s TRANSISTOR 25C2714Y 8-729-216-22 s TRANSISTOR 25A1162
D1 D2 D3 D4 D5	8-719-921-12 s DIODE HZZBLL 8-719-118-38 s DIODE 15Z46A 8-719-101-64 s DIODE RDG. 8EL2 8-719-101-64 s DIODE RDG. 8EL2 8-719-101-97 s DIODE ISS97-1	Q16 Q17 Q18 Q19 Q20	8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162
D6 D7 D8 D9 D10	8-719-101-97 s DIODE ISS97-1 8-719-101-97 s DIODE ISS97-1 8-719-104-34 s DIODE ISZ836 8-719-104-34 s DIODE ISZ836 8-719-101-97 s DIODE ISS97-1	021 022 023 024 025	8-729-216-22 s TRANSISTOR 2SA1162 8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162
D13 D14	8-719-104-34 s DIODE 1S2836 8-719-800-76 s DIODE 1SS226	Q26 Q27	8-729-100-66 s TRANSISTOR 2SC1623
DL1 DL2 DL3 DL4	1-415-676-13 s DELAY LINE 63.976uS/63.996uS 1-415-489-11 s DELAY LINE 160nS+8nS 1-415-489-11 s DELAY LINE 160nS+8nS 1-415-489-11 s DELAY LINE 160nS+8nS	027 028 029 030	8-729-100-66 s TRÂNSISTOR 2SC1623 8-729-216-22 s TRÂNSISTOR 2SA1162 8-729-100-66 s TRÂNSISTOR 2SC1623 8-729-216-22 s TRÂNSISTOR 2SA1162
DL5	1-415-676-13 s DELAY LINE 63. 976uS/63. 996uS	031 032	8-729-216-22 s TRANSISTOR 2SA1162 8-729-100-66 s TRANSISTOR 2SC1623
DL6 DL7 DL8 DL10	1-415-491-11 s DELAY LINE 200nS 1-415-709-11 s DELAY LINE 100nS 1-415-408-11 s DELAY LINE, DUAL 50nS, 100nS 1-415-836-11 s DELAY LINE 40nS+/-2nS	Q33 Q34 Q35	8-729-100-66 s TRANSISTOR 2SC1623 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-200-87 s TRANSISTOR 2SC2714Y
FL1 FL2 FL3	1-235-572-11 s LOW PASS 4.43MHz 1-235-572-11 s LOW PASS 4.43MHz 1-236-181-11 s LOW PASS 3.58MHz	Q36 Q37 Q38 Q39 Q40	8-765-930-08 s TRANSISTOR 3SK163-2 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-175-73 s TRANSISTOR 2SC2757 8-729-175-73 s TRANSISTOR 2SC2757
IC1 IC2 IC3 IC5 IC6	8-759-906-54 s IC TL064CNS 8-759-981-51 s IC RC1496M 1-807-416-11 s IC BH-1211 8-759-009-07 s IC MC14053BF 8-759-906-54 s IC TL064CNS	Q41 Q42 Q43 Q44 Q45	8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-216-22 s TRANSISTOR 2SA1162 8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623
1C8 1C9 1C10 1C11	1-807-416-11 s IC BH-1211 8-759-906-53 s IC TL062CPS 8-759-981-51 s IC RC1496M 1-807-416-11 s IC BH-1211	Q45 Q46 Q47 Q48	8-729-100-66 s TRANSISTOR 25C1623 8-729-100-66 s TRANSISTOR 25C1623 8-729-109-44 s TRANSISTOR 25C1623

(IE-26P	BOARD)	(IE-26P	BOARD)
Ref. No. or Q'ty		Ref. No. or Q'ty	Part No. SP Description
Q49	8-729-100-66 s TRANSISTOR 2SC1623	Q111	8-729-216-22 s TRANSISTOR 2SA1162
Q50	8-729-109-44 s TRANSISTOR 2SK94	Q112	8-729-100-66 s TRANSISTOR 2SC1623
Q51	8-729-200-87 s TRANSISTOR 2SC2714Y	Q113	8-729-100-66 s TRANSISTOR 2SC1623
Q52	8-729-100-66 s TRANSISTOR 2SC1623	Q114	8-729-100-66 s TRANSISTOR 2SC1623
Q53	8-729-200-87 s TRANSISTOR 2SC2714Y	Q115	8-729-100-66 s TRANSISTOR 2SC1623
Q54	8-729-216-22 s TRANSISTOR 2SA1162	Q116	8-729-109-44 s.TRANSISTOR 25K94
Q55	8-729-200-87 s TRANSISTOR 2SC2714Y	Q117	8-729-100-66 s.TRANSISTOR 25C1623
Q56	8-729-200-87 s TRANSISTOR 2SC2714Y	Q118	8-729-109-44 s.TRANSISTOR 25K94
Q57	8-729-100-66 s TRANSISTOR 2SC1623	Q119	8-729-109-44 s.TRANSISTOR 25K94
Q58	8-729-200-87 s TRANSISTOR 2SC2714Y	Q120	8-729-403-32 s.TRANSISTOR XN6534
Q59	8-729-216-22 s TRANSISTOR 2SA1162	Q121	8-729-100-66 s TRANSISTOR 2SC1623
Q60	8-729-200-87 s TRANSISTOR 2SC2714Y	Q123	8-729-403-32 s TRANSISTOR XN6534
Q61	8-729-216-22 s TRANSISTOR 2SA1162	Q124	8-729-100-66 s TRANSISTOR 2SC1623
Q62	8-729-216-22 s TRANSISTOR 2SA1162	Q126	8-729-100-66 s TRANSISTOR 2SC1623
Q63	8-729-100-66 s TRANSISTOR 2SC1623	Q127	8-729-200-87 s TRANSISTOR 2SC2714Y
Q64	8-729-100-66 s TRANSISTOR 2SC1623	Q128	8-729-100-66 s TRANSISTOR 2SC1623
Q65	8-729-100-66 s TRANSISTOR 2SC1623	Q129	8-729-100-66 s TRANSISTOR 2SC1623
Q66	8-729-100-66 s TRANSISTOR 2SC1623	Q130	8-729-100-66 s TRANSISTOR 2SC1623
Q67	8-729-100-66 s TRANSISTOR 2SC1623	Q131	8-729-403-32 s TRANSISTOR XM6534
Q68	8-729-100-66 s TRANSISTOR 2SC1623	Q133	8-729-100-66 s TRANSISTOR 2SC1623
Q69	8-729-100-66 s TRANSISTOR 2SC1623	Q134	8-765-930-08 s TRANSISTOR 3SK163-2
Q70	8-729-100-66 s TRANSISTOR 2SC1623	Q135	8-729-403-32 s TRANSISTOR XN6534
Q71	8-729-200-87 s TRANSISTOR 2SC2714Y	Q136	8-729-100-66 s TRANSISTOR 2SC1623
Q72	8-729-216-22 s TRANSISTOR 2SA1162	Q138	8-729-100-66 s TRANSISTOR 2SC1623
Q73	8-729-100-66 s TRANSISTOR 2SC1623	Q139	8-729-403-32 s TRANSISTOR XN6534
Q74	8-729-200-87 s TRANSISTOR 2SC2714Y	Q141	8-729-403-29 s TRANSISTOR XN6435
Q75	8-729-200-87 s TRANSISTOR 2SC2714Y	Q143	8-729-403-32 s TRANSISTOR XN6534
Q76	8-729-200-87 s TRANSISTOR 2SC2714Y	Q145	8-729-200-87 s TRANSISTOR 2SC2714Y
Q77	8-765-930-08 s TRANSISTOR 3SK163-2	Q146	8-729-200-87 s TRANSISTOR 2SC2714Y
Q78	8-729-200-87 s TRANSISTOR 2SC2714Y	Q147	8-729-100-66 s TRANSISTOR 2SC1623
Q79	8-729-200-87 s TRANSISTOR 2SC2714Y	Q148	8-729-100-66 s TRANSISTOR 2SC1623
Q80	8-729-175-73 s TRANSISTOR 2SC2757	Q149	8-765-930-08 s TRANSISTOR 3SK163-2
Q81	8-729-175-73 s TRANSISTOR 2SC2757	Q150	8-729-216-22 s TRANSISTOR 2SA1162
Q82	8-729-175-73 s TRANSISTOR 2SC2757	Q151	8-729-100-66 s TRANSISTOR 2SC1623
Q83	8-729-200-87 s TRANSISTOR 2SC2714Y	Q152	8-729-100-66 s TRANSISTOR 2SC1623
Q84	8-729-216-22 s TRANSISTOR 2SA1162	Q153	8-729-216-22 s TRANSISTOR 2SA1162
Q85	8-729-100-66 s TRANSISTOR 2SC1623	Q154	8-729-403-29 s TRANSISTOR XM6435
Q86	8-729-200-87 s TRANSISTOR 2SC2714Y	Q155	8-729-100-66 s TRANSISTOR 2SC1623
Q87	8-729-403-29 s TRANSISTOR XN6435	Q156	8-729-403-32 s TRANSISTOR XM6534
Q89	8-729-200-87 s TRANSISTOR 2SC2714Y	Q157	8-729-216-22 s TRANSISTOR 2SA1162
Q90	8-729-403-32 s TRANSISTOR XN6534	R1	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
Q91	8-729-100-66 s TRANSISTOR 2SC1623	R2	
Q93	8-729-100-66 s TRANSISTOR 2SC1623	R3	
Q94	8-729-100-66 s TRANSISTOR 2SC1623	R4	
Q95	8-729-403-32 s TRANSISTOR XN6534	R5	
Q96	8-729-100-66 s TRANSISTOR 2SC1623	R6	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
Q98	8-729-100-66 s TRANSISTOR 2SC1623	R7	
Q99	8-729-100-66 s TRANSISTOR 2SC1623	R8	
Q100	8-729-216-22 s TRANSISTOR 2SA1162	R9	
Q101	8-729-216-22 s TRANSISTOR 2SA1162	R10	
Q102	8-729-100-66 s TRANSISTOR 2SC1623	R11	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W
Q103	8-729-200-87 s TRANSISTOR 2SC2714Y	R14	
Q104	8-729-200-87 s TRANSISTOR 2SC2714Y	R18	
Q105	8-765-930-08 s TRANSISTOR 2SC2714Y	R20	
Q106	8-729-200-87 s TRANSISTOR 2SC2714Y	R21	
Q107	8-729-200-87 s TRANSISTOR 2SC2714Y	R25	1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-633-11 s METAL CHIP 180 0.50% 1/10W
Q108	8-729-175-73 s TRANSISTOR 2SC2757	R26	
Q109	8-729-175-73 s TRANSISTOR 2SC2757	R39	
Q110	8-729-200-87 s TRANSISTOR 2SC2714Y	R40	

(IE-26P BOARD)	(IE-26P BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R43 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W R44 1-216-636-11 s METAL CHIP 240 0.50% 1/10W R46 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R48 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R49 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W	R165
R50 1-216-669-11 s METAL CHIP 5.6K-0.50% 1/10W R51 1-216-647-11 s METAL CHIP 680 0.50% 1/10W R52 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R55 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R57 1-216-644-11 s METAL CHIP 510 0.50% 1/10W	R171 I-216-649-11 s METAL CHIP 820 0-50% 1/10W R172 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R176 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R177 1-216-673-11 s METAL CHIP 1K 0.50% 1/10W R178 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W
R58 1-216-652-11 s METAL CHIP 1.1K 0.50% 1/10W R59 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R60 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R63 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R64 1-216-653-11 s METAL CHIP 1.2K 0.50% 1/10W	R179
R65 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R66 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R69 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R71 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R72 1-216-652-11 s METAL CHIP 1.1K 0.50% 1/10W	R195
R73 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R74 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R77 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R78 1-216-653-11 s METAL CHIP 1.2K 0.50% 1/10W R79 1-216-675-11 s METAL CHIP 1.0K 0.50% 1/10W	R213
R80 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R84 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R85 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R88 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R90 1-216-644-11 s METAL CHIP 510 0.50% 1/10W	R233
R91 1-216-652-11 s METAL CHIP 1.1K 0.50% 1/10W R92 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R93 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R96 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R97 1-216-653-11 s METAL CHIP 1.2K 0.50% 1/10W	R242
R98 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R99 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R129 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R130 1-216-629-11 s METAL CHIP 1Z0 0.50% 1/10W R133 1-216-651-11 s METAL CHIP 1Z0 0.50% 1/10W	R248
R136 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R137 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W R138 1-216-647-11 s METAL CHIP 680 0.50% 1/10W R139 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R146 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W	R254
R147 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R150 1-216-682-11 s METAL CHIP 2OK 0.50% 1/10W R151 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R153 1-218-259-11 s METAL CHIP 13.7K 0.50% 1/10W R154 1-218-254-11 s METAL CHIP 2.55K 0.50% 1/10W	R259
R155 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R156 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R157 1-216-649-11 s METAL CHIP 820 0.50% 1/10W R158 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R160 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R265 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R266 1-216-641-11 s METAL CHIP 390 0.50% 1/10W R267 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R269 1-216-641-11 s METAL CHIP 390 0.50% 1/10W R270 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R161 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R162 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R163 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R164 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W	R271

(IE-26P BOARD)	(IE-26P BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R275 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R276 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R277 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R278 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R279 1-216-631-11 s METAL CHIP 1K 0.50% 1/10W	R440 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R446 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R447 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R449 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R450 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R280 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R282 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R283 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R284 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R285 1-216-643-11 s METAL CHIP 470 0.50% 1/10W	R456 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R457 1-216-637-11 s METAL CHIP 270 0.50% 1/10W R458 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R459 1-216-637-11 s METAL CHIP 270 0.50% 1/10W R460 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
R286 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R310 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R311 1-216-629-11 s METAL CHIP 120 0.50% 1/10W R314 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R317 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W	R461 1-216-637-11 s METAL CHIP 270 0.50% 1/10W R462 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R464 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W R489 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R490 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W
R318 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W R319 1-216-647-11 s METAL CHIP 680 0.50% 1/10W R320 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R327 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W R328 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W	RV1 1-228-456-00 s RES, ADJ, METAL 1K RV2 1-228-455-00 s RES, ADJ, METAL 500 RV7 1-228-458-00 s RES, ADJ, METAL 5K RV9 1-228-460-00 s RES, ADJ, METAL 20K RV10 1-228-460-00 s RES, ADJ, METAL 20K
R331	RV11 1-228-459-00 s RES, ADJ, METAL 10K RV12 1-228-459-00 s RES, ADJ, METAL 10K RV13 1-228-459-00 s RES, ADJ, METAL 10K RV14 1-228-455-00 s RES, ADJ, METAL 500 RV15 1-228-452-00 s RES, ADJ, METAL 50
R338	RV16 1-228-452-00 s RES, ADJ, METAL 50 RV20 1-228-460-00 s RES, ADJ, METAL 20K RV21 1-228-460-00 s RES, ADJ, METAL 20K RV22 1-228-473-00 s RES, ADJ, METAL 5K RV23 1-228-462-00 s RES, ADJ, METAL 100K
R344 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R346 1-216-656-11 s METAL CHIP 1.6K 0.50% 1/10W R347 1-216-667-11 s METAL CHIP 1.7K 0.50% 1/10W R349 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R351 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W	RV24 1-228-475-00 s RES, ADJ, METAL 20K RV25 1-228-474-00 s RES, ADJ, METAL 10K RV26 1-228-472-00 s RES, ADJ, METAL 2K RV27 1-228-455-00 s RES, ADJ, METAL 500 RV28 1-228-473-00 s RES, ADJ, METAL 5K
R352	RV29 1-228-456-00 s RES, ADJ, METAL IK RV30 1-228-455-00 s RES, ADJ, METAL 500 RV31 1-228-459-00 s RES, ADJ, METAL 10K RV32 1-228-455-00 s RES, ADJ, METAL 500
R364 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R365 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R372 1-216-629-11 s METAL CHIP 120 0.50% 1/10W R373 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W R374 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W	\$1
R375	
R399 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R402 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R424 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R425 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R428 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W	
R429 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R436 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R437 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R439 1-216-644-11 s METAL CHIP 510 0.50% 1/10W	

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LF-15 BOARD
                                                                                                                                                                               MB-270 BOARD
Ref. No. or Q'ty Part No.
                                                                                                                                                                               Ref. No. or Q'ty Part No.
                                                            SP Description
                                                                                                                                                                                                                                         SP Description
                          1-626-820-11 o PRINTED CIRCUIT BOARD, LF-15
                                                                                                                                                                                                         A-7515-062-A o MOUNTED CIRCUIT BOARD, MB-270
 lpc
                                                                                                                                                                               1pc
                          1-136-203-11 s FILM 0.01uF 5% 630V
1-136-206-11 s FILM 0.033uF 5% 630V
1-136-203-11 s FILM 0.01uF 5% 630V
1-136-203-11 s FILM 0.01uF 5% 630V
1-136-203-11 s FILM 0.01uF 5% 630V
                                                                                                                                                                               CN1
CN2
CN3
CN4
                                                                                                                                                                                                           -562-769-11 o CONNECTOR, MULTI

-562-769-11 o CONNECTOR, MULTI

-562-769-11 o CONNECTOR, MULTI

-562-769-11 o CONNECTOR, MULTI
                                                                                                                                                                                                                                                                             MULTI 90P, FEMALE
MULTI 90P, FEMALE
MULTI 90P, FEMALE
MULTI 90P, FEMALE
MULTI 90P, FEMALE
 C1
C2
C3
C4
C5
                                                                                                                                                                                                         1-562-769-11 o CONNECTOR,
                                                                                                                                                                               CN6
CN7
CN8
CN9
CN10
                          1-136-203-11 s FILM 0.01uF 5% 630V
1-136-203-11 s FILM 0.01uF 5% 630V
1-136-203-11 s FILM 0.01uF 5% 630V
1-136-203-11 s FILM 0.01uF 5% 630V
                                                                                                                                                                                                        1-562-769-11 o CONNECTOR, MULTI 90P, FEMALE
1-562-769-11 o CONNECTOR, MULTI 90P, FEMALE
1-562-769-11 o CONNECTOR, MULTI 90P, FEMALE
1-562-769-11 o CONNECTOR, MULTI 90P, FEMALE
1-506-643-11 o CONNECTOR, PS 28P, MALE
 C6
C7
C8
C9
 CN1
CN2
CN3
                          1-508-776-00 o CONNECTOR, 3P MALE
1-506-467-11 o CONNECTOR, 2P, MALE
1-508-776-00 o CONNECTOR, 3P MALE
                                                                                                                                                                                                        1-506-641-11 o CONNECTOR, 24P MALE
1-506-633-11 o CONNECTOR, 8P MALE
1-506-631-11 o CONNECTOR, 4P MALE
1-506-633-11 o CONNECTOR, 8P MALE
1-506-644-11 o CONNECTOR, PS 30P, MALE
                                                                                                                                                                               CN11
CN12
CN13
CN14
CN15
                          L2
L3
L4
L5
L6
                                                                                                                                                                               CN16
CN17
CN18
CN19
CN20
                                                                                                                                                                                                        1-506-637-11 o CONNECTOR, 16P MALE
1-506-633-11 o CONNECTOR, 8P MALE
1-506-634-11 o CONNECTOR, 10P MALE
1-506-631-11 o CONNECTOR, 4P MALE
1-506-633-11 o CONNECTOR, 8P MALE
 L7
L8
L9
L10
L11
                          1-506-638-11 o CONNECTOR, 18P MALE
1-506-640-11 o CONNECTOR, PS 22P, MALE
1-506-633-11 o CONNECTOR, 8P MALE
1-506-641-11 o CONNECTOR, 24P MALE
1-506-634-11 o CONNECTOR, 10P MALE
                                                                                                                                                                              CN21
CN22
CN23
CN24
CN25
                                                                                                                                                                              CN26
                                                                                                                                                                                                        1-506-467-11 o CONNECTOR, 2P MALE
 LP-53 BOARD
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D 0 11	AT
Ref. No. or Q'ty	Part No. SP Description
lpc lpc lpc	1-633-015-11 o PRINTED CIRCUIT BOARD, LP-53 2-280-622-11 o SUPPORT (M3), HEXAGON 7-682-903-01 s SCREW +PWH 3X5 7-685-533-14 s SCREW +BTP 2.6X6 TYPE2 N-S
D1 D2 D3 D4 D5	8-719-801-31 s DIODE TLG113A "DC OUT" 8-719-801-31 s DIODE TLG113A "LENS" 8-719-801-31 s DIODE TLG113A "VF" 8-719-801-31 s DIODE TLG113A "-5.5V" 8-719-801-31 s DIODE TLG113A "+5.5V"
D6	8-719-801-31 s DIODE TLG113A "+9.5V"
TM1	1-548-152-11 o HOUR METER, DIGITAL "TIMER"

MD-67 BOARD	(MD-67 BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
lpc A-7515-075-A o MOUNTED CIRCUIT BOARD, MD-67 lpc 2-251-622-00 o LEVER, PC BOARD lpc 7-626-317-11 s PIN, SPRING 2.5X6 2pcs 7-628-254-40 s SCREW +PS 2.6X12 4pcs 7-682-902-01 s SCREW +PWH 2.6X4	Q22 8-729-200-87 s TRANSISTOR 2SC2714Y Q23 8-729-122-63 s TRANSISTOR 2SA1226 Q24 8-729-122-63 s TRANSISTOR 2SA1226 Q25 8-729-200-87 s TRANSISTOR 2SC2714Y Q26 8-729-216-22 s TRANSISTOR 2SA1162
C52 1-107-049-00 s MICA 8.2PF 0.5PF 500V C76 1-102-965-00 s CERAMIC 39PF 5% 50V C77 1-102-960-00 s CERAMIC 24PF 5% 50V C78 1-102-960-00 s CERAMIC 24PF 5% 50V C88 1-102-959-00 s CERAMIC 22PF 5% 50V	027 8-729-216-22 s TRANSISTOR 2SA1162 028 8-729-216-22 s TRANSISTOR 2SA1162 029 8-729-216-22 s TRANSISTOR 2SA1162 030 8-729-216-22 s TRANSISTOR 2SA1162 031 8-729-216-22 s TRANSISTOR 2SA1162
CN1 1-562-730-11 o CONNECTOR, MULTI 90P, MALE CP1 1-577-202-11 s OSCILLATOR, CRYSTAL 36MHz	032 8-729-216-22 s TRANSISTOR 2SA1162 034 8-729-200-87 s TRANSISTOR 2SC2714Y 035 8-729-200-87 s TRANSISTOR 2SC2714Y 036 8-729-112-65 s TRANSISTOR 2SA1462
D1 8-719-119-52 s DIODE RD2. 2ESL2 D2 8-719-118-38 s DIODE RD2. 2ESL2 D3 8-719-101-64 s DIODE RD6. 8EL2 D4 8-719-104-34 s DIODE RD6. 8EL2 D5 8-719-101-64 s DIODE RD6. 8EL2	R1 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W R2 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R3 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R4 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R5 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
FB1 1-535-178-00 s RES, FERRITE FB2 1-535-178-00 s RES, FERRITE FB3 1-535-178-00 s RES, FERRITE FB4 1-535-178-00 s RES, FERRITE	R6 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R7 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R8 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R9 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
FL1 1-239-084-11 s LOW PASS 9MHz FL2 1-235-570-11 s BAND PASS 18MHz FL3 1-236-278-11 s LOW PASS 36MHz FL4 1-236-636-11 s LPF, CHROMA FL5 1-415-436-11 s PHASE SHIFT 36uH	R11 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R12 1-216-684-11 s METAL CHIP 24K 0.50% 1/10W R13 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R22 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
FL6 1-236-636-11 s LPF, CHROMA IC1 8-759-906-54 s IC TL064CNS IC2 8-759-981-51 s IC RC1496M IC3 8-759-948-03 s IC 74F175SJ IC4 8-759-981-51 s IC RC1496M IC5 8-759-981-51 s IC RC1496M	R24 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R25 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R27 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W
IC6 8-759-201-61 s IC TC40H004F LV1 1-412-150-11 s MICRO INDUCTOR 0.12UH 01 8-729-105-29 s TRANSISTOR 2SA1385 02 8-729-105-29 s TRANSISTOR 2SA1385	R30 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R31 1-216-648-11 s METAL CHIP 750 0.50% 1/10W R32 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R34 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R39 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W
03 8-729-105-19 s 1RANSISTOR 25C3518 04 8-729-100-66 s TRANSISTOR 25C1623 05 8-729-216-22 s TRANSISTOR 25A1162	R45 1-216-624-11 s METAL CHIP 75 0.50% 1/10W R46 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R48 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R50 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R51 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W
Õ7 8-729-112-65 s TRANSISTOR 2SA1462 Õ8 8-729-200-87 s TRANSISTOR 2SC2714Y Õ9 8-729-122-63 s TRANSISTOR 2SA1226 Õ10 8-729-200-87 s TRANSISTOR 2SC2714Y	R63 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R66 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R67 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R68 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W
011 8-729-122-63 s TRANSISTOR 2SA1226 012 8-729-200-87 s TRANSISTOR 2SC2714Y 013 8-729-216-22 s TRANSISTOR 2SA1162 014 8-729-216-22 s TRANSISTOR 2SA1162 015 8-729-200-87 s TRANSISTOR 2SC2714Y	R70 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R72 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R73 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R74 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R75 1-216-639-11 s METAL CHIP 330 0.50% 1/10W
016 8-729-122-63 s TRANSISTOR 2SA1226 017 8-729-200-87 s TRANSISTOR 2SC2714Y 018 8-729-216-22 s TRANSISTOR 2SA1162 019 8-729-175-72 s TRANSISTOR 2SC2757 020 8-729-112-65 s TRANSISTOR 2SA1462 021 8-729-200-87 s TRANSISTOR 2SC2714Y	R77 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R78 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R79 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R80 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R81 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R83 1-216-643-11 s METAL CHIP 47O 0.50% 1/10W

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MS-33 BOARD
 (MD-67 BOARD)
                                                                                                                                                                                                                          Ref. No. or Q'ty
Ref, No.
or Q'ty Part No.
                                                                           SP Description
                                                                                                                                                                                                                                                         Part No.
                                                                                                                                                                                                                                                                                                   SP Description
                                                                                                                                                                                                                                                         A-7515-068-A O MOUNTED CIRCUIT BOARD, MS-33
Ser No Up to 41125
A-7515-322-A O MOUNTED CIRCUIT BOARD, MS-331
Ser No 41201 AND HIGHER
2-251-622-00 O LEVER, PC BOARD
                                      -216-643-11 s METAL CHIP 470 0.50% 1/10W
-216-643-11 s METAL CHIP 470 0.50% 1/10W
-216-639-11 s METAL CHIP 330 0.50% 1/10W
-216-637-11 s METAL CHIP 270 0.50% 1/10W
-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W
 R87
R90
                                                                                                                                                                                                                            1pc
R99
R101
R115
R116
R123
                                      -216-687-11 s METAL CHIP 33K 0.50% 1/10W

-216-699-11 s METAL CHIP 100K 0.50% 1/10W

-216-683-11 s METAL CHIP 22K 0.50% 1/10W

-216-691-11 s METAL CHIP 47K 0.50% 1/10W

-216-624-11 s METAL CHIP 75 0.50% 1/10W
                                                                                                                                                                                                                                                           3-621-124-00 o SPACER
7-626-317-11 s PIN, SPRING 2.5X6
7-628-254-40 s SCREW +PS 2.6X12
7-682-902-01 s SCREW +PWH 2.6X4
8-759-748-67 s IC UPD27C512G-20
                                                                                                                                                                                                                            10pcs
                                                                                                                                                                                                                            1pc
2pcs
4pcs
2pcs
                                1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W
1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
                                                                                                                                                                                                                                                          1-130-470-00 s MYLAR 820PF 5% 50V

1-130-487-00 s MYLAR 0.022uF 5% 50V

1-130-499-00 s MYLAR 0.22uF 5% 50V

1-163-011-11 s CERAMIC CHIP 0.0015uF 10% 50V

1-163-011-11 s CERAMIC CHIP 0.0015uF 10% 50V
 R125
R126
R127
R127
R132
                                                                                                                                                                                                                           C140
C141
C142
C51
 R133
R134
R143
R146
                                1-163-086-00 s CERAMIC CHIP 3PF 0.25PF 50V
1-163-086-00 s CERAMIC CHIP 3PF 0.25PF 50V
1-163-086-00 s CERAMIC CHIP 3PF 0.25PF 50V
1-163-011-11 s CERAMIC CHIP 0.0015uF 10% 50V
  R148
                                                                                                                                                                                                                           CN1
                                                                                                                                                                                                                                                          1-562-730-11 o CONNECTOR, MULTI 90P, MALE
                                      -216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W
-216-649-11 s METAL CHIP 820 0.50% 1/10W
                                                                                                                                                                                                                                                         8-719-921-12 s DIODE HZ2BLL
8-719-118-38 s DIODE 1SZ46A
8-719-101-64 s DIODE RD6. 8EL2
8-719-101-64 s DIODE RD6. 8EL2
8-719-101-64 s DIODE RD6. 8EL2
                                     -228-456-00 s RES,
-228-457-00 s RES,
-228-459-00 s RES,
-228-459-00 s RES,
-228-456-00 s RES,
                                                                                                                       METAL 1K
METAL 2K
METAL 10K
METAL 10K
                                                                                                      ADJ,
ADJ,
ADJ,
  RV3
                                                                                                                                                                                                                                                         8-719-104-34 s DIODE 1S2836
8-719-104-34 s DIODE 1S2836
8-719-911-19 s DIODE 1SS119
  RV5
                                       -228-455-00 s RES,

-228-455-00 s RES,

-228-459-00 s RES,

-228-455-00 s RES,

-228-455-00 s RES,
  RV6
                                                                                                                                                                                                                                                         8-759-906-54 s IC TL064CNS
8-759-972-26 s IC LM1881N
8-759-201-53 s IC TC40H000F
8-759-009-07 s IC MC14053BF
8-759-906-54 s IC TL064CNS
                                                                                                     ADJ, METAL 500
ADJ, METAL 10K
ADJ, METAL 500
ADJ, METAL 500
 RV7
RV8
                                                                                                                                                                                                                           IC2
IC3
IC4
IC5
  RVŠ
  RV10
                                1-228-461-00 s RES, ADJ, METAL 50K
 RV11
                                                                                                                                                                                                                                                         8-759-100-97 s IC UPC339G2
8-759-100-97 s IC UPC339G2
8-759-906-54 s IC TL064CNS
8-759-100-97 s IC UPC339G2
8-759-009-51 s IC MC14538BF
                                                                                                                                                                                                                           IC6
IC7
IC8
IC9
IC10
                                                                                                                                                                                                                                                         8-759-201-53 s IC TC40H000F
8-759-906-54 s IC TL064CNS
8-759-201-53 s IC TC40H000F
8-759-008-98 s IC MC14040BF
8-759-737-47 s IC 27C512G-20-370CURSOR
                                                                                                                                                                                                                                                         8-759-201-60 s
8-759-201-64 s
8-759-201-60 s
8-759-201-64 s
8-759-201-60 s
                                                                                                                                                                                                                                                                                                          IC TC40H002F
IC TC40H074F
IC TC40H002F
IC TC40H074F
IC TC40H002F
                                                                                                                                                                                                                                                              -759-201-53 s IC TC40H000F

-759-204-75 s IC TC40H175F

-759-201-60 s IC TC40H002F

-759-927-02 s IC SN74HC7266NS

-759-201-60 s IC TC40H002F
                                                                                                                                                                                                                                                       8-759-201-60 s IC TC40H002F
8-759-201-60 s IC TC40H002F
8-759-201-60 s IC TC40H002F
8-759-204-74 s IC TC40H174F
8-759-738-56 s IC 27C512G370M0NISEL2
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(MS-33 BOARD)	(MS-33 BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
IC31 8-759-201-61 s IC TC40H004F IC32 8-759-201-60 s IC TC40H002F IC33 8-759-100-97 s IC UPC339G2 IC34 8-759-009-07 s IC MC14053BF IC37 8-759-201-53 s IC TC40H000F	Q43 8-729-216-22 s TRANSISTOR 2SA1162 Q44 8-729-216-22 s TRANSISTOR 2SA1162 Q45 8-729-101-25 s TRANSISTOR 2SC1009A Q46 8-729-122-63 s TRANSISTOR 2SA1226 Q47 8-729-122-63 s TRANSISTOR 2SA1226
IC38 8-759-201-60 s IC TC40H002F IC39 8-741-135-60 s IC BX1356 IC40 8-741-135-60 s IC BX1356 IC41 8-741-135-60 s IC BX1356 IC42 8-741-135-60 s IC BX1356	Q48 8-729-101-25 s TRANSISTOR 2SC1009A Q49 8-729-216-22 s TRANSISTOR 2SA1162 Q50 8-729-216-22 s TRANSISTOR 2SA1162 Q51 8-729-216-22 s TRANSISTOR 2SA1162 Q52 8-729-100-66 s TRANSISTOR 2SC1623
IC43 8-759-201-53 s IC TC40H000F IC44 8-759-239-23 s IC SN74HC86NS IC45 8-759-201-60 s IC TC40H002F IC46 8-759-204-51 s IC TC40H008F IC47 8-759-209-54 s IC TC4S01F	Q53 8-729-100-66 s TRANSISTOR 2SC1623 Q54 8-729-100-66 s TRANSISTOR 2SC1623 Q55 8-729-159-64 s TRANSISTOR 2SD596 Q56 8-729-100-66 s TRANSISTOR 2SC1623 Q57 8-729-216-22 s TRANSISTOR 2SA1162
IC48 8-741-135-60 s IC BX1356 IC49 8-759-234-20 s IC TC7S08F IC50 8-759-209-97 s IC TC4S81F IC51 8-759-209-97 s IC TC4S81F	Q58 8-729-216-22 s TRANSISTOR 2SA1162 Q59 8-729-100-66 s TRANSISTOR 2SC1623 Q60 8-729-100-66 s TRANSISTOR 2SC1623 Q61 8-729-100-66 s TRANSISTOR 2SC1623 Q62 8-729-100-66 s TRANSISTOR 2SC1623
Q1 8-729-105-29 s TRANSISTOR 2SA1385 Q2 8-729-105-29 s TRANSISTOR 2SA1385 Q3 8-729-105-19 s TRANSISTOR 2SC3518 Q4 8-729-100-66 s TRANSISTOR 2SC1623 Q6 8-729-216-22 s TRANSISTOR 2SA1162	Q63 8-729-216-22 s TRANSISTOR 2SA1162 Q64 8-729-216-22 s TRANSISTOR 2SA1162 Q65 8-729-101-25 s TRANSISTOR 2SC1009A Q66 8-729-122-63 s TRANSISTOR 2SA1226 Q67 8-729-122-63 s TRANSISTOR 2SA1226
Q7 8-729-216-22 s TRANSISTOR 2SA1162 Q8 8-729-216-22 s TRANSISTOR 2SA1162 Q9 8-729-216-22 s TRANSISTOR 2SA1162 Q10 8-729-216-22 s TRANSISTOR 2SA1162 Q12 8-729-100-66 s TRANSISTOR 2SC1623	Q68 8-729-101-25 s TRANSISTOR 2SC1009A Q69 8-729-100-66 s TRANSISTOR 2SC1623 Q70 8-729-105-29 s TRANSISTOR 2SA1385 Q71 8-729-100-66 s TRANSISTOR 2SC1623 Q72 8-769-401-67 s TRANSISTOR 3SK163-1
Q13 8-729-100-66 s TRANSISTOR 2SC1623 Q14 8-729-100-66 s TRANSISTOR 2SC1623 Q15 8-729-216-22 s TRANSISTOR 2SA1162 Q16 8-729-216-22 s TRANSISTOR 2SA1162 Q17 8-729-216-22 s TRANSISTOR 2SA1162	073 8-769-401-67 s TRANSISTOR 3SK163-1 074 8-769-401-67 s TRANSISTOR 3SK163-1 075 8-769-401-67 s TRANSISTOR 3SK163-1 076 8-769-401-67 s TRANSISTOR 3SK163-1 077 8-729-100-66 s TRANSISTOR 2SC1623
Q18 8-729-216-22 s TRANSISTOR 2SA1162 Q19 8-729-216-22 s TRANSISTOR 2SA1162 Q20 8-729-100-66 s TRANSISTOR 2SC1623 Q21 8-729-162-43 s TRANSISTOR 2SB624-BV3 Q22 8-729-100-66 s TRANSISTOR 2SC1623	078 8-729-216-22 s TRANSISTOR 2SA1162 079 8-729-100-66 s TRANSISTOR 2SC1623 080 8-729-216-22 s TRANSISTOR 2SA1162 081 8-729-216-22 s TRANSISTOR 2SA1162 082 8-729-100-66 s TRANSISTOR 2SC1623
Q23 8-729-216-22 s TRANSISTOR 2SA1162 Q24 8-729-216-22 s TRANSISTOR 2SA1162 Q25 8-729-100-66 s TRANSISTOR 2SC1623 Q26 8-729-100-66 s TRANSISTOR 2SC1623 Q27 8-729-100-66 s TRANSISTOR 2SC1623	R1 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W R2 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R3 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R4 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R5 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
Q28 8-729-100-66 s s TRANSISTOR 2SC1623 Q29 8-729-216-22 s TRANSISTOR 2SA1162 Q30 8-729-216-22 s TRANSISTOR 2SA1162 Q31 8-729-101-25 s TRANSISTOR 2SC1009A Q32 8-729-122-63 s TRANSISTOR 2SA1226	R6 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R7 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R8 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R9 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R10 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
Q33 8-729-122-63 s TRANSISTOR 2SA1226 Q34 8-729-101-25 s TRANSISTOR 2SC1009A Q35 8-729-216-22 s TRANSISTOR 2SA1162 Q36 8-729-100-66 s TRANSISTOR 2SC1623 Q37 8-729-216-22 s TRANSISTOR 2SA1162	R16 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W R17 1-216-693-11 s METAL CHIP 56K 0.50% 1/10W R18 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R19 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R20 1-216-666-11 s METAL CHIP 4.7K 0.50% 1/10W
Q38 8-729-216-22 s TRANSISTOR 2SA1162 Q39 8-729-100-66 s TRANSISTOR 2SC1623 Q40 8-729-100-66 s TRANSISTOR 2SC1623 Q41 8-729-100-66 s TRANSISTOR 2SC1623 Q42 8-729-100-66 s TRANSISTOR 2SC1623	R21 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R22 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R23 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R24 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W

(MS-33 BOARD)	(MS-33 BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R27 1-216-638-11 s METAL CHIP 300 0.50% 1/10W R28 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R29 1-216-638-11 s METAL CHIP 300 0.50% 1/10W R31 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R32 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R161 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R162 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R163 1-216-624-11 s METAL CHIP 75 0.50% 1/10W R164 1-216-624-11 s METAL CHIP 75 0.50% 1/10W R187 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W
R33 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R34 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R35 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R36 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R38 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W	R188 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R195 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R196 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R197 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R199 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W
R39 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R40 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W R41 1-216-639-11 s METAL CHIP 330 0.50% 1/10W R42 1-216-636-11 s METAL CHIP 240 0.50% 1/10W R43 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W	R200 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R201 1-216-624-11 s METAL CHIP 75 0.50% 1/10W R223 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R224 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R238 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R53 1-216-693-11 s METAL CHIP 56K 0.50% 1/10W R54 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R55 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R56 1-216-690-11 s METAL CHIP 43K 0.50% 1/10W R57 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W	R242 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R243 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R244 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R245 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R247 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W
R58 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R59 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R60 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R67 1-216-688-11 s METAL CHIP 36K 0.50% 1/10W R72 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W	R248 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R249 1-216-624-11 s METAL CHIP 75 0.50% 1/10W R270 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R271 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R278 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R73 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R74 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R75 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R76 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R77 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W	R279 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R280 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R282 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R283 1-216-659-11 s METAL CHIP 3.9K 0.50% 1/10W R284 1-216-624-11 s METAL CHIP 75 0.50% 1/10W
R78 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R79 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R80 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R115 1-216-680-11 s METAL CHIP 16K 0.50% 1/10W R116 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	R324 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W R341 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R342 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R343 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W
R117 1-216-680-11 s METAL CHIP 16K 0.50% 1/10W R118 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R130 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R131 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R132 1-216-645-11 s METAL CHIP 560 0.50% 1/10W	RB1 1-239-024-11 s MATRIX RV1 1-228-456-00 s RES, ADJ, METAL 1K RV2 1-228-459-00 s RES, ADJ, METAL 10K RV3 1-228-457-00 s RES, ADJ, METAL 2K RV4 1-228-460-00 s RES, ADJ, METAL 20K RV5 1-228-474-00 s RES, ADJ, METAL 10K
R133 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R134 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R135 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R136 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R137 1-216-639-11 s METAL CHIP 330 0.50% 1/10W	RV6 1-228-459-00 s RES, ADJ, METAL 10K RV7 1-228-457-00 s RES, ADJ, METAL 2K RV8 1-228-460-00 s RES, ADJ, METAL 20K RV9 1-228-473-00 s RES, ADJ, METAL 5K RV10 1-228-456-00 s RES, ADJ, METAL 1K
R138 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R139 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R140 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R141 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R142 1-216-645-11 s METAL CHIP 560 0.50% 1/10W	RV15 1-228-456-00 s RES, ADJ, METAL 1K RV16 1-228-456-00 s RES, ADJ, METAL 1K RV17 1-228-456-00 s RES, ADJ, METAL 1K RV18 1-228-460-00 s RES, ADJ, METAL 20K RV19 1-228-456-00 s RES, ADJ, METAL 1K
R143	\$1 1-570-610-11 s SWITCH, TOGGLE \$2 1-570-612-11 s SWITCH, TOGGLE \$3 1-570-610-11 s SWITCH, TOGGLE \$4 1-553-252-00 s SWITCH, ROTARY \$5 1-570-610-11 s SWITCH, TOGGLE
R148 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W R155 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R158 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R160 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	S6 1-570-610-11 s SWITCH, TOGGLE S7 1-570-610-11 s SWITCH, TOGGLE S8 1-570-857-11 s SWITCH, SLIDE

PR-130 B	 OARD	(PR-130	BOARD)
Ref. No.	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description
lpc lpc	A-7515-067-A o MOUNTED CIRCUIT BOARD, PR-130 2-251-622-00 o LEVER, PC BOARD	DL1	1-415-599-11 s DELAY LINE (AT-30)
24pcs 1pc	3-621-124-00 o SPACER 7-626-317-11 s PIN, SPRING 2.5X6 7-628-254-40 s SCREW +PS 2.6X12	IC1 IC2 IC3	8-759-906-54 s IC TL064CNS 8-741-108-20 s IC BX1082 8-759-981-51 s IC RC1496M
2pcs	7-682-902-01 s SCREW +PWH 2.6X4	ICA	8-741-130-50 s IC BX1305
4pcs		IC5	8-741-108-20 s IC BX1082
C28	1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V	IC6	8-759-920-01 s IC SL3127C-DP
C30	1-163-084-00 s CERAMIC CHIP 1.5PF 0.25PF 50V	IC7	8-759-981-51 s IC RC1496M
C35	1-135-216-11 s TANTALUM CHIP 10uF 10% 10V	IC8	8-741-130-40 s IC BX1304
C36	1-135-216-11 s TANTALUM CHIP 10uF 10% 10V	IC9	8-741-108-20 s IC BX1082
C44	1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V	IC10	8-741-108-20 s IC BX1082
C46 C65	1-163-084-00 s CERAMIC CHIP 1.5PF 0.25PF 50V 1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V 1-163-084-00 s CERAMIC CHIP 1.5PF 0.25PF 50V	IC11 IC12 IC13	8-759-981-51 s IC RC1496M 8-741-130-50 s IC BX1305
C67	1-163-084-00 s CENAMIC CHIP 1.5FF 0.25FF 50V	IC13	8-741-108-20 s IC BX1082
C72	1-135-216-11 s TANTALUM CHIP 10uF 10% 10V	IC14	8-759-920-01 s IC SL3127C-DP
C73	1-135-216-11 s TANTALUM CHIP 10uF 10% 10V	IC15	8-759-981-51 s IC RC1496M
C81 C82	1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V 1-163-084-00 s CERAMIC CHIP 1.5PF 0.25PF 50V 1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V 1-163-084-00 s CERAMIC CHIP 1.5PF 0.25PF 50V	IC16 IC17 IC18	8-741-130-40 s IC BX1304 8-741-108-20 s IC BX1082
C100	1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V	IC18	8-741-108-20 s IC BX1082
C102	1-163-084-00 s CERAMIC CHIP 1.5PF 0.25PF 50V	IC19	8-759-981-51 s IC RC1496M
C107	1-135-216-11 s TANTALUM CHIP 10uF 10% 10V	IC20	8-741-130-50 s IC BX1305
C108	1-135-216-11 s TANTALUM CHIP 10uF 10% 10V	IC21	8-741-108-20 s IC BX1082
C116	1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V	IC22	8-759-920-01 s IC SL3127C-DP
Č117 C157 C158	1-135-216-11 s TANTALUM CHIP 10uF 10% 10V 1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V 1-163-084-00 s CERAMIC CHIP 1.5PF 0.25PF 50V 1-135-153-21 s TANTALUM CHIP 2.2uF 10% 20V 1-135-153-21 s TANTALUM CHIP 2.2uF 10% 20V	ĪČ <u>23</u> IC24 IC25	8-759-981-51 s IC RC1496M 8-741-130-40 s IC BX1304 8-741-108-20 s IC BX1082
C159		IC26	8-759-906-53 s IC TL062CPS
C160		IC27	8-759-009-07 s IC MC14053BF
C161 C162 C163	1-135-153-21 s TANTALUM CHIP 2. 2uF 10% 20V 1-135-153-21 s TANTALUM CHIP 2. 2uF 10% 20V	ĪČŽ8 IC29 IC30	8-759-906-53 s IC TL062CPS 8-759-009-07 s IC MC14053BF 8-759-009-07 s IC MC14053BF
C172	1-135-153-21 s TANTALUM CHIP 2. 2uF 10% 20V	IC31	8-759-147-84 s IC CXD8072Q
C173		IC32	8-759-994-64 s IC MB88341PF
Č174 C175 C176	1-135-153-21 s TANTALUM CHIP 2. 2uF 10% 20V 1-135-153-21 s TANTALUM CHIP 2. 2uF 10% 20V 1-135-153-21 s TANTALUM CHIP 2. 2uF 10% 20V 1-135-153-21 s TANTALUM CHIP 2. 2uF 10% 20V	ÎC33 IC34 IC35	8-759-906-54 s IC TLO64CNS 8-759-906-54 s IC TLO64CNS 8-759-906-54 s IC TLO64CNS
C177	1-135-161-21 s TANTALUM CHIP 22uF 10% 10V	IC36	8-759-009-07 s IC MC14053BF
C178	1-135-161-21 s TANTALUM CHIP 22uF 10% 10V	IC37	8-759-100-97 s IC UPC339G2
C179 C186 C187	1-135-161-21 s TANTALUM CHIP 22uF 10% 10V 1-163-086-00 s CERAMIC CHIP 3PF 0.25PF 50V 1-163-086-00 s CERAMIC CHIP 3PF 0.25PF 50V	ÎC39 IC40	8-759-209-90 s IC TC4S71F 8-759-209-97 s IC TC4S81F
C188 C193	1-163-086-00 s CERAMIC CHIP 3PF 0.25PF 50V 1-163-086-00 s CERAMIC CHIP 3PF 0.25PF 50V	Q1 Q2 Q3 Q4 Q5	8-729-105-29 s TRANSISTOR 2SA1385 8-729-105-29 s TRANSISTOR 2SA1385 8-729-105-19 s TRANSISTOR 2SC3518 8-729-200-87 s TRANSISTOR 2SC2714Y
C194	Î-163-086-00 s CERÂMÎC CHÎP 3PF 0. 25PF 50V	Q4	8-729-200-87 s TRANSISTOR 2802714Y
CN1	1-562-730-11 o CONNECTOR, MULTI 90P, MALE	Q5	8-729-122-63 s TRANSISTOR 28A1226
D1	8-719-921-12 s DIODE HZ2BLL	Q6	8-729-122-63 s TRANSISTOR 2SA1226
	8-719-118-38 s DIODE 1SZ46A	Q7	8-729-101-25 s TRANSISTOR 2SC1009A
D2 D3 D4	8-719-101-64 s DIODE RD6, 8EL2 8-719-101-64 s DIODE RD6, 8EL2	08 09 010	8-729-109-44 s TRANSISTOR 2SK94 8-729-109-44 s TRANSISTOR 2SK94 8-729-101-25 s TRANSISTOR 2SC1009A
ĎŜ	8-719-800-76 s DIODE 1SS226	011	8-729-216-22 s TRANSISTOR 2SA1162
D6	8-719-800-76 s DIODE 1SS226	012	8-729-216-22 s TRANSISTOR 2SA1162
Ď7	8-719-800-76 s DIODE 1SS226	013	8-729-216-22 s TRANSISTOR 25A1162
D8	8-719-948-47 s DIODE HSM88AS	014	8-729-216-22 s TRANSISTOR 25A1162
D9	8-719-948-47 s DIODE HSM88AS	015	8-729-101-25 s TRANSISTOR 25C1009A
D10	8-719-104-34 s DIODE 1S2836	016	8-729-101-25 s TRANSISTOR 2SC1009A
D11	8-719-800-76 s DIODE 1SS226	017	8-729-122-63 s TRANSISTOR 2SA1226
1/11	0 110 000 10 8 01000 100220	018	8-729-122-63 s TRANSISTOR 2SA1226

(PR-130 BOARD)	(PR-130 BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
Q19 8-729-122-63 s TRANSISTOR 2SA1226 Q20 8-729-122-63 s TRANSISTOR 2SA1226 Q21 8-729-122-63 s TRANSISTOR 2SA1226 Q22 8-729-122-63 s TRANSISTOR 2SA1226 Q23 8-729-101-25 s TRANSISTOR 2SC1009A	Q78 8-729-100-66 s TRANSISTOR 2SC1623 Q79 8-729-100-66 s TRANSISTOR 2SC1623 Q80 8-729-216-22 s TRANSISTOR 2SA1162 Q81 8-729-216-22 s TRANSISTOR 2SA1162 Q82 8-729-216-22 s TRANSISTOR 2SA1162
Q24 8-729-109-44 s TRANSISTOR 2SK94 Q25 8-729-216-22 s TRANSISTOR 2SA1162 Q26 8-729-216-22 s TRANSISTOR 2SA1162 Q27 8-729-216-22 s TRANSISTOR 2SA1162 Q28 8-729-216-22 s TRANSISTOR 2SA1162	Q83 8-729-100-66 s TRANSISTOR 2SC1623 Q84 8-729-216-22 s TRANSISTOR 2SA1162 Q85 8-729-100-66 s TRANSISTOR 2SC1623 Q86 8-729-216-22 s TRANSISTOR 2SA1162 Q87 8-729-216-22 s TRANSISTOR 2SA1162
Q29 8-729-216-22 s TRANSISTOR 2SA1162 Q30 8-729-216-22 s TRANSISTOR 2SA1162 Q31 8-729-100-66 s TRANSISTOR 2SC1623 Q32 8-729-100-66 s TRANSISTOR 2SC1623 Q33 8-729-100-66 s TRANSISTOR 2SC1623	Q88 8-729-100-66 s TRANSISTOR 2SC1623 Q89 8-729-100-66 s TRANSISTOR 2SC1623 Q90 8-729-216-22 s TRANSISTOR 2SA1162 Q91 8-729-216-22 s TRANSISTOR 2SA1162 Q92 8-729-100-66 s TRANSISTOR 2SC1623
034 8-729-216-22 s TRANSISTOR 2SA1162 035 8-729-216-22 s TRANSISTOR 2SA1162 036 8-729-216-22 s TRANSISTOR 2SA1162 037 8-729-100-66 s TRANSISTOR 2SC1623 Q38 8-729-100-66 s TRANSISTOR 2SC1623	093 8-729-100-66 s TRANSISTOR 2SC1623 094 8-729-216-22 s TRANSISTOR 2SA1162 095 8-729-100-66 s TRANSISTOR 2SC1623 096 8-729-200-87 s TRANSISTOR 2SC2714Y 097 8-729-122-63 s TRANSISTOR 2SA1226
Q39 8-729-216-22 s TRANSISTOR 2SA1162 Q40 8-729-216-22 s TRANSISTOR 2SA1162 Q41 8-729-216-22 s TRANSISTOR 2SA1162 Q42 8-729-100-66 s TRANSISTOR 2SC1623 Q43 8-729-100-66 s TRANSISTOR 2SC1623	Q98 8-729-122-63 s TRANSISTOR 2SA1226 Q99 8-729-101-25 s TRANSISTOR 2SC1009A Q100 8-729-109-44 s TRANSISTOR 2SK94 Q101 8-729-109-44 s TRANSISTOR 2SK94 Q102 8-729-101-25 s TRANSISTOR 2SC1009A
Q44 8-729-216-22 s TRANSISTOR 2SA1162 Q45 8-729-216-22 s TRANSISTOR 2SA1162 Q46 8-729-100-66 s TRANSISTOR 2SC1623 Q47 8-729-100-66 s TRANSISTOR 2SC1623 Q48 8-729-216-22 s TRANSISTOR 2SA1162	Q103 8-729-216-22 s TRANSISTOR 2SA1162 Q104 8-729-216-22 s TRANSISTOR 2SA1162 Q105 8-729-216-22 s TRANSISTOR 2SA1162 Q106 8-729-216-22 s TRANSISTOR 2SA1162 Q107 8-729-101-25 s TRANSISTOR 2SC1009A
Q49 8-729-100-66 s TRANSISTOR 2SC1623 Q50 8-729-200-87 s TRANSISTOR 2SC2714Y Q51 8-729-122-63 s TRANSISTOR 2SA1226 Q52 8-729-122-63 s TRANSISTOR 2SA1226 Q53 8-729-101-25 s TRANSISTOR 2SC1009A	Q108 8-729-101-25 s TRANSISTOR 2SC1009A Q109 8-729-122-63 s TRANSISTOR 2SA1226 Q110 8-729-122-63 s TRANSISTOR 2SA1226 Q111 8-729-122-63 s TRANSISTOR 2SA1226 Q112 8-729-122-63 s TRANSISTOR 2SA1226
Q54 8-729-109-44 s TRANSISTOR 2SK94 Q55 8-729-109-44 s TRANSISTOR 2SK94 Q56 8-729-101-25 s TRANSISTOR 2SC1009A Q57 8-729-216-22 s TRANSISTOR 2SA1162 Q58 8-729-216-22 s TRANSISTOR 2SA1162	Q113 8-729-122-63 s TRANSISTOR 2SA1226 Q114 8-729-122-63 s TRANSISTOR 2SA1226 Q115 8-729-101-25 s TRANSISTOR 2SC1009A Q116 8-729-109-44 s TRANSISTOR 2SK94 Q117 8-729-216-22 s TRANSISTOR 2SA1162
059 8-729-216-22 s TRANSISTOR 2SA1162 060 8-729-216-22 s TRANSISTOR 2SA1162 061 8-729-101-25 s TRANSISTOR 2SC1009A 062 8-729-101-25 s TRANSISTOR 2SC1009A 063 8-729-122-63 s TRANSISTOR 2SA1226	Q118 8-729-216-22 s TRANSISTOR 2SA1162 Q119 8-729-216-22 s TRANSISTOR 2SA1162 Q120 8-729-216-22 s TRANSISTOR 2SA1162 Q121 8-729-216-22 s TRANSISTOR 2SA1162 Q122 8-729-216-22 s TRANSISTOR 2SA1162 Q122 8-729-216-22 s TRANSISTOR 2SA1162
Q64 8-729-122-63 s TRANSISTOR 2SA1226 Q65 8-729-122-63 s TRANSISTOR 2SA1226 Q66 8-729-122-63 s TRANSISTOR 2SA1226 Q67 8-729-122-63 s TRANSISTOR 2SA1226 Q68 8-729-122-63 s TRANSISTOR 2SA1226	0123 8-729-100-66 s TRANSISTOR 2SC1623 0124 8-729-100-66 s TRANSISTOR 2SC1623 0125 8-729-100-66 s TRANSISTOR 2SC1623 0126 8-729-216-22 s TRANSISTOR 2SA1162 0127 8-729-216-22 s TRANSISTOR 2SA1162
Q69 8-729-101-25 s TRANSISTOR 2SC1009A Q70 8-729-109-44 s TRANSISTOR 2SK94 Q71 8-729-216-22 s TRANSISTOR 2SA1162 Q72 8-729-216-22 s TRANSISTOR 2SA1162 Q73 8-729-216-22 s TRANSISTOR 2SA1162	Q128 8-729-216-22 s TRANSISTOR 2SA1162 Q129 8-729-100-66 s TRANSISTOR 2SC1623 Q130 8-729-216-22 s TRANSISTOR 2SA1162 Q131 8-729-100-66 s TRANSISTOR 2SC1623 Q132 8-729-216-22 s TRANSISTOR 2SA1162
Q74 8-729-216-22 s TRANSISTOR 2SA1162 Q75 8-729-216-22 s TRANSISTOR 2SA1162 Q76 8-729-216-22 s TRANSISTOR 2SA1162 Q77 8-729-100-66 s TRANSISTOR 2SC1623	Q133 8-729-216-22 s TRANSISTOR 2SA1162 Q134 8-729-100-66 s TRANSISTOR 2SC1623 Q135 8-729-100-66 s TRANSISTOR 2SC1623 Q136 8-729-216-22 s TRANSISTOR 2SA1162

(PR-130	BOARD)	(PR-130	BOARD)
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description
Q137	8-729-216-22 s TRANSISTOR 2SA1162	R30	1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W
Q138	8-729-100-66 s TRANSISTOR 2SC1623	R44	
Q139	8-729-100-66 s TRANSISTOR 2SC1623	R45	
Q140	8-729-216-22 s TRANSISTOR 2SA1162	R46	
Q141	8-729-100-66 s TRANSISTOR 2SC1623	R47	
Q142	8-729-100-66 s TRANSISTOR 2SC1623	R48	1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
Q144	8-729-216-22 s TRANSISTOR 2SA1162	R49	
Q145	8-729-216-22 s TRANSISTOR 2SA1162	R50	
Q146	8-729-216-22 s TRANSISTOR 2SA1162	R51	
Q147	8-729-216-22 s TRANSISTOR 2SA1162	R52	
Q148	8-729-101-25 s TRANSISTOR 2SC1009A	R53	1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-648-11 s METAL CHIP 750 0.50% 1/10W 1-216-641-11 s METAL CHIP 390 0.50% 1/10W 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W
Q149	8-729-216-22 s TRANSISTOR 2SA1162	R54	
Q150	8-729-216-22 s TRANSISTOR 2SA1162	R55	
Q151	8-729-100-66 s TRANSISTOR 2SC1623	R56	
Q152	8-729-100-66 s TRANSISTOR 2SC1623	R57	
Q153	8-729-101-25 s TRANSISTOR 2SC1009A	R58	1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
Q154	8-729-216-22 s TRANSISTOR 2SA1162	R59	
Q155	8-729-216-22 s TRANSISTOR 2SA1162	R60	
Q156	8-729-100-66 s TRANSISTOR 2SC1623	R64	
Q157	8-729-100-66 s TRANSISTOR 2SC1623	R66	
Q158	8-729-101-25 s TRANSISTOR 2SC1009A	R70	1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-676-11 s METAL CHIP 11K 0.50% 1/10W 1-216-633-11 s METAL CHIP 180 0.50% 1/10W 1-216-603-11 s METAL CHIP 10 0.50% 1/10W
Q159	8-729-216-22 s TRANSISTOR 2SA1162	R71	
Q160	8-729-216-22 s TRANSISTOR 2SA1162	R72	
Q161	8-729-100-66 s TRANSISTOR 2SC1623	R73	
Q162	8-729-100-66 s TRANSISTOR 2SC1623	R74	
Q163	8-729-100-66 s TRANSISTOR 2SC1623	R75	1-216-639-11 s METAL CHIP 330 0.50% 1/10W
Q164	8-729-216-22 s TRANSISTOR 2SA1162	R76	1-216-615-11 s METAL CHIP 33 0.50% 1/10W
Q165	8-729-200-87 s TRANSISTOR 2SC2714Y	R77	1-216-643-11 s METAL CHIP 470 0.50% 1/10W
Q166	8-729-200-87 s TRANSISTOR 2SC2714Y	R78	1-216-619-11 s METAL CHIP 47 0.50% 1/10W
Q167	8-729-200-87 s TRANSISTOR 2SC2714Y	R79	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
0168 0169 0170	8-729-216-22 s TRANSISTOR 2SAI162 8-729-216-22 s TRANSISTOR 2SAI162 8-729-216-22 s TRANSISTOR 2SAI162	R80 R81 R82 R83	1-216-644-11 s METAL CHIP 510 0.50% 1/10W 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W 1-216-616-11 s METAL CHIP 36 0.50% 1/10W 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W
R1	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W	R84	1-216-661-11 s METAL CHIP 3. 9K 0. 50% 1/10W 1-216-665-11 s METAL CHIP 3. 9K 0. 50% 1/10W 1-216-644-11 s METAL CHIP 510 0. 50% 1/10W 1-216-661-11 s METAL CHIP 2. 7K 0. 50% 1/10W 1-216-665-11 s METAL CHIP 3. 9K 0. 50% 1/10W
R2	1-216-691-11 s METAL CHIP 47K 0.50% 1/10W	R85	
R3	1-216-662-11 s METAL CHIP 3K 0.50% 1/10W	R86	
R4	1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W	R87	
R5	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W	R89	
R6	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R90	1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-665-11 s METAL CHIP 2.7K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-665-11 s METAL CHIP 510 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-665-11 s METAL S METAL CHIP 3.9K 0.50% 1/10W 1-216-665-11 s METAL S METAL
R7	1-216-677-11 s METAL CHIP 12K 0.50% 1/10W	R91	
R8	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	R92	
R9	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R93	
R10	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R95	
R11	1-216-644-11 s METAL CHIP 510 0.50% 1/10W	R96	1-216-627-11 s METAL CHIP 100 0.50% 1/10W
R13	1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	R97	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R14	1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W	R98	1-216-627-11 s METAL CHIP 10O 0.50% 1/10W
R15	1-216-682-11 s METAL CHIP 20K 0.50% 1/10W	R99	1-216-642-11 s METAL CHIP 430 0.50% 1/10W
R16	1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W	R100	1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W
R17	1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W	R101	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-621-11 s METAL CHIP 56 0.50% 1/10W 1-216-621-11 s METAL CHIP 56 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-675-11 s METAL CHIP 1.0K 0.50% 1/10W
R18	1-216-670-11 s METAL CHIP 6.2K 0.50% 1/10W	R103	
R19	1-216-645-11 s METAL CHIP 560 0.50% 1/10W	R104	
R20	1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W	R117	
R21	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R118	
R23	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W	R120	1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W
R26		R121	1-216-634-11 s METAL CHIP 200 0.50% 1/10W
R27		R124	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R28		R125	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R29		R140	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W

(PR-130 BOARD)	(PR-130 BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R141 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R142 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R143 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R155 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R157 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	R236 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R237 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R239 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R240 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R241 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R158 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W R159 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W R160 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W R161 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W R162 1-216-670-11 s METAL CHIP 6.2K 0.50% 1/10W	R242 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R243 1-216-642-11 s METAL CHIP 430 0.50% 1/10W R244 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R245 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R247 1-216-621-11 s METAL CHIP 56 0.50% 1/10W
R163 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R164 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R165 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R167 1-216-651-11 s METAL CHIP 10K 0.50% 1/10W R170 1-216-683-11 s METAL CHIP 2ZK 0.50% 1/10W	R248 1-216-621-11 s METAL CHIP 56 0.50% 1/10W R261 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R264 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W R265 1-216-634-11 s METAL CHIP 200 0.50% 1/10W R282 1-216-651-11 s METAL CHIP IK 0.50% 1/10W
R171 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R172 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W R173 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R174 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R188 1-216-627-11 s METAL CHIP 100 0.50% 1/10W	R283 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R284 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R285 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R297 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R299 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W
R189 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W R190 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R191 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R192 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R193 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W	R300 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W R301 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W R302 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W R303 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W R304 1-216-670-11 s METAL CHIP 6.2K 0.50% 1/10W
R194 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R195 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R196 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R197 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R198 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R305 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R306 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R307 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R309 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R312 1-216-683-11 s METAL CHIP 2ZK 0.50% 1/10W
R199 1-216-648-11 s METAL CHIP 750 0.50% 1/10W R200 1-216-641-11 s METAL CHIP 390 0.50% 1/10W R201 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W R202 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W R203 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W	R313 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R314 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W R315 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R316 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R330 1-216-627-11 s METAL CHIP 100 0.50% 1/10W
R204 1-216-665-11 s METAL CHIP 3. 9K 0.50% 1/10W R208 1-216-674-11 s METAL CHIP 9.10K 0.50% 1/10W R210 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R214 1-216-663-11 s METAL CHIP 3. 3K 0.50% 1/10W R215 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W	R331 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W R332 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R333 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R334 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R335 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
R216 1-216-676-11 s METAL CHIP 11K 0.50% 1/10W R217 1-216-633-11 s METAL CHIP 180 0.50% 1/10W R218 1-216-603-11 s METAL CHIP 10 0.50% 1/10W R219 1-216-639-11 s METAL CHIP 330 0.50% 1/10W R220 1-216-615-11 s METAL CHIP 33 0.50% 1/10W	R336 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R337 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R338 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R339 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R341 1-216-648-11 s METAL CHIP 750 0.50% 1/10W
R221 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R222 1-216-619-11 s METAL CHIP 47 0.50% 1/10W R223 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R224 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R225 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W	R342 1-216-641-11 s METAL CHIP 390 0.50% 1/10W R343 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W R344 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W R345 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W R346 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W
R226 1-216-616-11 s METAL CHIP 36 0.50% 1/10W R227 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R228 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R229 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R230 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	R350 1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W R352 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R356 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R357 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R358 1-216-676-11 s METAL CHIP 11K 0.50% 1/10W
R231 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R233 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R234 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R235 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W	R359 1-216-633-11 s METAL CHIP 180 0.50% 1/10W R360 1-216-603-11 s METAL CHIP 10 0.50% 1/10W R361 1-216-639-11 s METAL CHIP 330 0.50% 1/10W R362 1-216-615-11 s METAL CHIP 33 0.50% 1/10W

(PR-130 BOARD)	(PR-130 BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R363 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R364 1-216-619-11 s METAL CHIP 47 0.50% 1/10W R365 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R366 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R367 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W	R589 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R590 1-216-643-11 s METAL CHIP 470 0.50% 1/10W R591 1-216-643-11 s METAL CHIP 470 0.50% 1/10W RB1 1-232-509-00 s COMPOSITION CIRCUIT BLOCK
R368 1-216-616-11 s METAL CHIP 36 0.50% 1/10W R369 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R370 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R371 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R372 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	RV1 1-228-456-00 s RES. ADJ. METAL 1K RV2 1-228-475-00 s RES. ADJ. METAL 20K RV3 1-228-475-00 s RES. ADJ. METAL 20K RV5 1-228-475-00 s RES. ADJ. METAL 20K RV7 1-228-454-00 s RES. ADJ. METAL 20K
R373 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R375 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R376 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R377 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R378 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	RV8 1-228-470-00 s RES, ADJ, METAI, 500 RV9 1-228-472-00 s RES, ADJ, METAL 2K RV10 1-228-475-00 s RES, ADJ, METAL 2OK RV11 1-228-460-00 s RES, ADJ, METAL 2OK RV13 1-228-475-00 s RES, ADJ, METAL 2OK
R379 1-216-644-11 s METAL CHIP 510 0.50% 1/10W R381 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R382 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R384 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R385 1-216-642-11 s METAL CHIP 430 0.50% 1/10W	RV15 1-228-454-00 s RES, ADJ, METAL 200 RV16 1-228-470-00 s RES, ADJ, METAL 500 RV17 1-228-472-00 s RES, ADJ, METAL 2K RV18 1-228-475-00 s RES, ADJ, METAL 20K RV19 1-228-475-00 s RES, ADJ, METAL 20K
R386 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R387 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R389 1-216-621-11 s METAL CHIP 56 0.50% 1/10W R390 1-216-621-11 s METAL CHIP 56 0.50% 1/10W R403 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W	RV21 1-228-475-00 s RES. ADJ, METAL 20K RV23 1-228-454-00 s RES. ADJ, METAL 200 RV24 1-228-470-00 s RES. ADJ, METAL 500 RV25 1-228-472-00 s RES. ADJ, METAL 2K RV26 1-228-454-00 s RES. ADJ, METAL 200
R404 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R406 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W R407 1-216-634-11 s METAL CHIP 200 0.50% 1/10W R424 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R425 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W	RV27 1-228-475-00 s RES. ADJ, METAL 20K RV28 1-228-460-00 s RES. ADJ, METAL 20K RV29 1-228-475-00 s RES. ADJ, METAL 20K RV30 1-228-458-00 s RES. ADJ, METAL 5K RV31 1-228-462-00 s RES. ADJ, METAL 100K
R426 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R427 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R444 1-216-682-11 s METAL CHIP 20K 0.50% 1/10W R446 1-216-639-11 s METAL CHIP 330 0.50% 1/10W R447 1-216-629-11 s METAL CHIP 120 0.50% 1/10W	S1 1-570-610-11 s SWITCH, TOGGLE TH1 1-807-361-11 s THERMISTOR, POSITIVE TH2 1-807-361-11 s THERMISTOR, POSITIVE TH3 1-807-361-11 s THERMISTOR, POSITIVE
R454 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W R455 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W R457 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W R458 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W R459 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	
R460 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W R461 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R462 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W R463 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R469 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W	
R470 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R471 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R499 1-216-660-11 s METAL CHIP 2.4K 0.50% 1/10W R520 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R528 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W	
R536 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R550 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R551 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R568 1-216-634-11 s METAL CHIP 200 0.50% 1/10W R569 1-216-634-11 s METAL CHIP 200 0.50% 1/10W	
R570 1-216-634-11 s METAL CHIP 200 0.50% 1/10W R571 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W R572 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W R573 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W	

PS-192 BOARD		
Ref. No. or Q'ty	Part No. SP Description	
lpc	A-7515-063-A o MOUNTED CIRCUIT BOARD, PS-192	
C1 C2 C3 C4 C5	1-136-210-00 s FILM 0.01uF 20% 250V 1-136-210-00 s FILM 0.01uF 20% 250V 1-161-742-00 s CERAMIC 0.0022uF 20% 400V 1-161-742-00 s CERAMIC 0.0022uF 20% 400V 1-125-601-11 s ELECT 470uF 20% 450VW	
CN1	1-564-607-11 o CONNECTOR, 6P, MALE	
D1	8-719-300-63 s DIODE LB156	
L1 L2	1-459-215-00 s COIL, 120uH 1-459-215-00 s COIL, 120uH	
T1	1-421-468-00 s LINE FILTER	

PS-198	BOARD
Ref. No or Q'ty	Part No. SP Description
lpc	A-7515-076-A o MOUNTED CIRCUIT BOARD, PS-198
lpc	1-533-188-11 o HOLDER, FUSE
lpc	3-740-829-01 o SUPPORT, HEXAGON
lpc	3-740-839-01 o BRACKET, FUSE
2pcs	3-741-724-01 o HEAT SINK (TO-126)
lpc	7-628-254-10 s SCREW +PS 2.6X6
lpe	7-682-647-09 s SCREW +PS 3X6
4pcs	7-682-903-11 s SCREW +PWH 3X6
C1	1-136-187-11 s FILM 0.047uF 5% 250V
C2	1-127-465-00 s ELECT 10uF 20% 400V
C3	1-161-051-00 s CERAMIC 0.01uF 10% 25V
C4	1-124-248-00 s ELECT 22uF 20% 25V
C6	1-124-477-11 s ELECT 47uF 20% 25V
C8	1-124-477-11 s ELECT 47uF 20% 25V
C10	1-130-495-00 s MYLAR 0.1uF 5% 50V
C11	1-106-343-00 s MYLAR 0.001uF 5% 200V
C12	1-161-742-00 s CERAMIC 0.0022uF 20% 400V
C13	1-124-755-00 s ELECT 3300uF 20% 16V
C14	1-124-665-11 s ELECT 10uF 20% 200V
C15	1-123-872-00 s ELECT 22uF 20% 400V
C16	1-130-499-00 s MYLAR 0.22uF 5% 50V
C17	1-124-665-11 s ELECT 10uF 20% 200V
C18	1-161-045-00 s CERAMIC 0.0033uF 10% 50V
C19	1-126-104-11 s ELECT 470uF 20% 25V
C21	1-130-477-00 s MYLAR 0.0033uF 5% 50V
C22	1-130-483-00 s MYLAR 0.01uF 5% 50V
C24	1-124-477-11 s ELECT 47uF 20% 25V
C25	1-130-495-00 s MYLAR 0.1uF 5% 50V
C28	1-130-473-00 s MYLAR 0 0015uF 5% 50V
C29	1-136-203-11 s FILM 0 01uF 5% 630V
C31	1-124-755-00 s ELECT 3300uF 20% 16V
C32	1-130-499-00 s MYLAR 0 22uF 5% 50V
C33	1-124-755-00 s ELECT 3300uF 20% 16V
C34	1-130-499-00 s MYLAR 0.22uF 5% 50V
C35	1-124-755-00 s ELECT 3300uF 20% 16V
C36	1-130-499-00 s MYLAR 0.22uF 5% 50V
C39	1-126-104-11 s ELECT 470uF 20% 25V
C41	1-124-120-11 s ELECT 220uF 20% 25V
C42	1-124-120-11 s ELECT 220uF 20% 25V
C43	1-126-176-11 s ELECT 220uF 20% 10V
C44	1-124-242-00 s ELECT 33uF 20% 25V
C46	1-124-242-00 s ELECT 33uF 20% 25V
C47	1-124-242-00 s ELECT 33uF 20% 25V
C48	1-124-120-11 s ELECT 220uF 20% 25V
C49	1-124-360-00 s ELECT 1000uF 20% 16V
C50	1-124-261-00 s ELECT 10uF 20% 50V
C51	1-126-233-11 s ELECT 22uF 20% 35V
C53	1-124-755-00 s ELECT 3300uF 20% 16V
C54	1-130-499-00 s MYLAR 0.22uF 5% 50V
C55	1-124-755-00 s ELECT 3300uF 20% 16V
C56	1-130-499-00 s MYLAR 0.22uF 5% 50V
C59	1-162-666-11 s CERAMIC 0.022uF 10% 50V
C60	1-162-710-11 s CERAMIC 100PF 5% 50V
C61	1-162-734-11 s CERAMIC 0.001uF 1% 50V
C62	1-162-710-11 s CERAMIC 100PF 5% 50V
C64	1-106-351-00 s MYLAR 0.0022uF 5% 100V
C69	1-126-104-11 s ELECT 470uF 20% 25V
C70	1-126-104-11 s ELECT 470uF 20% 25V

(PS-198	BOARD)	(PS-198	BOARD)
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description
C76	1-162-674-11 s CERAMIC 39PF 5% 50V	L2 L3	1-421-329-00 s COIL, CHOKE 10uH 1-410-253-11 s COIL, CHOKE 80uH
CN1 CN2 CN3 CN4	1-564-674-11 o CONNECTOR, 8P, MALE 1-564-915-11 o CONNECTOR, 7P, MALE 1-564-242-00 o CONNECTOR, 5P, MALE 1-564-243-00 o CONNECTOR, 6P, MALE	L4 L5	1-410-253-11 s COIL, CHOKE 80uh 1-410-253-11 s COIL, CHOKE 80uh 1-408-549-00 s INDUCTOR 150MH
CN4 CN5	1-506-621-11 o CONNECTOR, 12P, MALE	L7 L8 L9	1-410-948-11 s INDUCTOR 100uH 1-410-948-11 s INDUCTOR 100uH 1-410-948-11 s INDUCTOR 100uH
CN6 CN7 CN8 CN9	1-564-242-00 o CONNECTOR, 5P, MALE 1-564-243-00 o CONNECTOR, 6P, MALE 1-506-621-11 o CONNECTOR, 12P, MALE 1-506-633-11 o CONNECTOR, 6P, MALE 1-506-633-11 o CONNECTOR, 8P MALE 1-506-626-11 o CONNECTOR, 22P MALE 1-506-467-11 o CONNECTOR, 2P, MALE	L10 L12	1-410-948-11 s INDUCTOR 100uH 1-408-549-00 s INDUCTOR 150MH
D1 D2	8-719-900-95 s DIODE VO9G 8-719-300-76 s DIODE RH-1A	L13 L15 L16 L17	1-410-253-11 s COIL, CHOKE 80uH 1-410-640-11 s COIL, OUTPUT CHOKE 130uH 1-408-549-00 s INDUCTOR 150MH 1-410-948-11 s INDUCTOR 100uH
D1 D2 D3 D4 D5	8-719-109-89 s D10DE RD5.6E-B2 8-719-110-60 s D10DE RD24E-B2 8-719-110-60 s D10DE RD24E-B2	L18	1-410-948-11 s INDUCTOR 100uH
D6	8-719-911-19 s DIODE 1SS119 8-719-109-89 s DIODE RD5.6E-B2	L19 01	1-410-948-11 s INDUCTOR 100uH 8-729-811-11 s TRANSISTOR 2SD1111
D7 D8 D9 D10	8-719-911-19 s DIODE 183119 8-719-923-48 s DIODE 182348H 8-719-000-20 s THYRISTOR BCR10CM-12L	Q1 Q2 Q3 Q4 Q5	8-729-105-97 s TRANSISTOR 2SA1156 8-729-105-97 s TRANSISTOR 2SA1156 8-729-255-12 s TRANSISTOR 2SC2551 8-729-906-53 s TRANSISTOR 2SC2542-15
D11 D12 D13	8-719-911-19 s DIODE 1SS119 8-719-903-46 s DIODE ESAD85-009 8-719-903-46 s DIODE ESAD85-009	Q6 Q7	8-729-906-53 s TRANSISTOR 2SC2542-15 8-729-140-96 s TRANSISTOR 2SD774-34
D14 D15	8-719-981-01 s DIODE ERA81-004 8-719-981-01 s DIODE ERA81-004	Q6 Q7 Q8 Q9 Q10	8-729-902-41 s TRANSISTOR 25C3318 8-729-902-41 s TRANSISTOR 25C3318 8-729-320-62 s TRANSISTOR 25D789-03C
D16 D17	8-719-981-01 s DIODE ERA81-004 8-719-981-01 s DIODE ERA81-004	Q11 Q12	8-729-320-62 s TRANSISTOR 2SD789-03C 8-729-119-78 s TRANSISTOR 2SC2785-HF
D18 D19 D20	8-719-981-01 s DIODE ERA81-004 8-719-910-65 s DIODE HZ6B2L 8-719-911-19 s DIODE ISS119	013 014 015	8-729-119-78 s TRANSISTOR 25C2785-HF 8-729-119-78 s TRANSISTOR 25C2785-HF 8-729-119-78 s TRANSISTOR 25C2785-HF
D21 D22 D23	8-719-110-60 s DIODE RD24E-B2 8-719-815-85 s DIODE 181585	Q16 Q17	8-729-802-08 s TRANSISTOR 2SC3150 8-729-364-12 s TRANSISTOR 2SC641K
D23 D24 D25	8-719-110-41 s DIODE RDISES-B2 8-719-900-95 s DIODE VO9G 8-719-923-48 s DIODE 1S2348H	Q18 Q19 Q20	8-729-304-12 S TRANSISTOR 2501271-P 8-729-401-67 s TRANSISTOR 2501271-P 8-729-119-76 s TRANSISTOR 2501271-P 8-729-119-76 s TRANSISTOR 2541175-E
D26 D27	8-719-911-19 s DIODE 1SS119 8-719-981-01 s DIODE ERA81-004 8-719-981-01 s DIODE ERA81-004	021 022	8-729-105-29 s TRANSISTOR 2SA1385 8-729-105-29 s TRANSISTOR 2SA1385
D28 D29 D30	8-719-981-01 s DIODE ERASI-004 8-719-981-01 s DIODE ERASI-004	023 024 025	8-729-119-76 s TRANSISTOR 28A1175-E 8-729-105-29 s TRANSISTOR 28A1385 8-729-105-29 s TRANSISTOR 28A1385
D31 D32	8-719-981-00 s DIODE ERB81-004 8-719-981-00 s DIODE ERB81-004 8-719-981-01 s DIODE ERA81-004	R1 R2	1-247-895-00 s CARBON 470K 5% 1/4W 1-247-903-00 s CARBON 1M 5% 1/4W
D33 D34 D35	8-719-981-01 s DIODE ERASI-004 8-719-911-19 s DIODE 1SS119	R4 R5 R6	1-214-926-21 s METAL 360K 1% 1/2W 1-247-883-00 s CARBON 150K 5% 1/4W 1-214-925-00 s METAL 330K 1% 1/2W
D36 D37	8-719-911-19 s DIODE 1SS119 8-719-102-53 s DIODE 1SZ53	R14	1-247-729-11 s CARBON 15 5% 1/2W
D38 D39 D70	8-719-101-47 s DIODE RD4.7EL2 8-719-981-00 s DIODE ERB81-004 8-719-981-00 s DIODE ERB81-004	R18 R19 R20 R23	1-205-657-00 s WIREWOUND 150 5% 5W F 1-247-893-11 s CARBON 390K 5% 1/4W 1-247-893-11 s CARBON 390K 5% 1/4W 1-214-557-00 s METAL 1K 1% 1/8W
F1	⚠1-532-808-11 s FUSE, 2A 250V	R9/1	1-214-832-00 s METAL 47 1% 1/2W
IC1 IC2 IC3 IC4	8-759-982-10 s IC RC7809FA 8-759-904-94 s IC TL494CN 8-759-103-93 s IC UPC393C 8-759-937-35 s IC TL1451ACN	R29 Z R31 R32 R33	A1-205-627-00 s WIREWOUND 0.015 5% 5W F 1-214-593-00 s METAL 33K 1% 1/8W 1-214-586-00 s METAL 16K 1% 1/8W 1-214-575-00 s METAL 5.6K 1% 1/8W
ĪČ5 L1	8-759-135-80 s ÎC ÛPC358C 1-410-306-11 s COIL, CHOKE 130uH	R34 R35	1-247-883-00 s CARBON 150K 5% 1/4W 1-214-574-00 s METAL 5.1K 1% 1/8W

(PS-198 BOARD)	SG-167P BOARD	
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description	
R38 1-214-590-00 s METAL 24K 1% 1/8W R39 1-214-585-00 s METAL 15K 1% 1/8W R40 1-214-573-00 s METAL 4.7K 1% 1/8W R41 1-214-573-00 s METAL 4.7K 1% 1/8W R43 1-214-581-00 s METAL 10K 1% 1/8W	lpc A-7515-070-A o MOUNTED CIRCUIT BOARD, SG-167P lpc 2-251-622-00 o LEVER, PC BOARD lpc 7-626-317-11 s PIN, SPRING 2.5X6 2pcs 7-628-254-40 s SCREW +PS 2.6X12 4pcs 7-682-902-01 s SCREW +PWH 2.6X4	
R44 1-214-581-00 s METAL 10K 1% 1/8W R45 1-214-551-00 s METAL 560 1% 1/8W R46 1-214-557-00 s METAL 1K 1% 1/8W R47 1-214-925-00 s METAL 330K 1% 1/2W	C38	
R49 1-247-899-11 s CARBON 680K 5% 1/4W	CN1 1-562-730-11 o CONNECTOR, MULTI 90P, MALE	
R50 1-214-913-00 s METAL 100K 1% 1/2W R55 1-247-838-00 s CARBON 2K 5% 1/4W	CP1 1-577-182-11 s OSCILLATOR, CRYSTAL 28. 375MHz	
R56 1-247-838-00 s CARBON 2K 5% 1/4W R58 1-247-838-00 s CARBON 2K 5% 1/4W R68 1-215-820-11 s METAL 39K 1% 1/8W	D2 8-719-800-76 s DIODE 1SS226 D3 8-719-800-76 s DIODE 1SS226 D4 8-719-104-34 s DIODE 1S2836 D5 8-719-921-12 s DIODE HZ2BLI. D6 8-719-118-38 s DIODE 1SZ46A	
R69 1-214-581-00 s METAL 10K 1% 1/8W R73 1-214-587-00 s METAL 18K 1% 1/8W R75 1-214-584-00 s METAL 13K 1% 1/8W	D6 8-719-118-38 s DIODE 1SZ46A D7 8-719-101-64 s DIODE RD6, 8EL2	
R76 1-214-591-00 s METAL 27K 1% 1/8W R77 1-215-826-11 s METAL 68K 1% 1/8W	D8 8-719-101-64 s DIODE RD6.8EL2	
R78 1-215-822-11 s METAL 47K 1% 1/8W R79 1-215-826-11 s METAL 68K 1% 1/8W	FB1 1-535-178-00 s RES, FERRITE FB2 1-535-178-00 s RES, FERRITE FB3 1-535-178-00 s RES, FERRITE	
R85 1-214-593-00 s METAL 33K 1% 1/8W R86 1-214-573-00 s METAL 4.7K 1% 1/8W R90 1-214-586-00 s METAL 16K 1% 1/8W	FL1 1-235-574-12 s LOW PASS 1MHz	
R91 1-214-572-00 s METAL 4.3K 1% 1/8W R94 1-214-585-00 s METAL 15K 1% 1/8W R95 1-214-572-00 s METAL 4.3K 1% 1/8W R99 1-247-838-00 s CARBON 2X 5% 1/4W	IC1 8-759-906-54 s IC TL064CNS IC5 8-757-930-11 s IC CX7930A IC6 8-759-907-21 s IC CX7969 IC7 8-759-009-51 s IC MC14538BF IC8 8-759-008-84 s IC MC14015BF	
RV1 1-228-456-00 s RES. ADJ, METAL 1K RV2 1-228-456-00 s RES. ADJ, METAL 1K RV3 1-228-456-00 s RES, ADJ, METAL 1K	IC9 8-759-008-84 s IC MC14015BF IC10 8-759-008-79 s IC TC4011BF IC11 8-759-008-74 s IC MC14001BF IC12 8-759-009-12 s IC MC14071BF IC13 8-759-200-79 s IC TC4049BF	
RY1 1-515-626-11 s RELAY T1 1-448-074-22 s TRANSFORMER, CONVERTER		
T1 1-448-074-22 s TRANSFORMER, CONVERTER T2 1-447-106-00 s TRANSFORMER, DRIVE T3 1-446-912-00 s TRANSFORMER, CONVERTER (SUB) T4 1-449-910-11 s TRANSFORMER, DC-DC CONVERTER	IC14 8-759-009-04 s IC MC14050BF IC15 8-759-008-79 s IC TC4011BF IC16 8-759-200-79 s IC TC4049BF IC17 8-759-009-37 s IC MC14512BF IC18 8-759-147-84 s IC CXD8072Q	
	IC19 8-759-200-79 s IC TC4049BF IC20 8-759-925-90 s IC SN74HC74NS	
	01 8-729-105-29 s TRANSISTOR 2SA1385 02 8-729-105-29 s TRANSISTOR 2SA1385 03 8-729-105-19 s TRANSISTOR 2SC3518 04 8-729-216-22 s TRANSISTOR 2SA1162 05 8-729-216-22 s TRANSISTOR 2SA1162	
	06 8-729-216-22 s TRANSISTOR 2SA1162 07 8-729-100-66 s TRANSISTOR 2SC1623 08 8-729-200-87 s TRANSISTOR 2SC2714Y 09 8-729-100-66 s TRANSISTOR 2SC1623 010 8-729-200-87 s TRANSISTOR 2SC2714Y	
	011 8-729-216-22 s TRANSISTOR 2SA1162 012 8-729-216-22 s TRANSISTOR 2SA1162 013 8-729-200-87 s TRANSISTOR 2SC2714Y 014 8-729-100-66 s TRANSISTOR 2SC1623 015 8-729-200-87 s TRANSISTOR 2SC2714Y	
	016 8-729-216-22 s TRANSISTOR 2SA1162 017 8-729-216-22 s TRANSISTOR 2SA1162	

(SG-167P BOARD)

Ref. No. or Q'ty	Part No. SP Description
019 021 022 023	8-729-101-25 s TRANSISTOR 2SC1009A 8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623 8-729-101-25 s TRANSISTOR 2SC1009A
R1 R2 R3 R4 R5	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
R6 R7 R8 R9 R10	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R28 R29 R30 R31 R32	1-216-658-11 s METAL CHIP 2K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W
R33 R35 R36 R37 R38	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-654-11 s METAL CHIP 1.3K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R41 R42 R43 R44 R45	1-216-658-11 s METAL CHIP 2K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
R46 R48 R49 R50 R51	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-654-11 s METAL CHIP 1.3K 0.50% 1/10W 1-216-668-11 s METAL CHIP 5.1K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R86 R87 R96 R104 R115	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-692-11 s METAL CHIP 51K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R135 R136 R137 R138	1-216-623-11 s METAL CHIP 68 0.50% 1/10W 1-216-637-11 s METAL CHIP 270 0.50% 1/10W 1-216-623-11 s METAL CHIP 68 0.50% 1/10W 1-216-637-11 s METAL CHIP 270 0.50% 1/10W
RB1 RB2 RB3	1-239-024-11 s MATRIX 1-239-025-11 s MATRIX 1-239-026-11 s MATRIX
RV1	1-228-456-00 s RES, ADJ, METAL 1K
S1 S2	1-570-857-11 s SWITCH, SLIDE 1-570-857-11 s SWITCH, SLIDE

SW-386	BUYDD
コリー・リロロ	DOMINIO

Ref. No. or Q'ty Part No. SP Description
1-632-987-11 o PRINTED CIRCUIT BOARD, SW-386
CNI 1-506-484-11 o CONNECTOR, 5P MALE

SW-387 BOARD

Ref. No. or Q'ty Part No. SP Description

1-632-988-11 o PRINTED CIRCUIT BOARD, SW-387

CN1 1-506-482-11 o CONNECTOR, 3P MALE

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SW-388 BOARD
Ref. No. or Q'ty Part No.
                                                              SP Description
                          1-632-989-11 o PRINTED CIRCUIT BOARD, SW-388
                          1-131-377-00 s TANTALUM 10uF 10% 10V
 C1
                           1-506-628-11 o CONNECTOR, 26P, MALE
1-506-487-11 o CONNECTOR, 8P, MALE
1-506-483-21 o CONNECTOR, 4P, MALE
1-506-481-11 o CONNECTOR, 2P, MALE
                           1-408-417-21 s INDUCTOR (LF-8S)
  Ll
                                 -249-419-11 s CARBON 1.5K 5% 1/4W

-249-422-11 s CARBON 2.7K 5% 1/4W

-249-422-11 s CARBON 2.7K 5% 1/4W

-249-422-11 s CARBON 2.7K 5% 1/4W

-249-419-11 s CARBON 1.5K 5% 1/4W
  R1
R2
R3
R4
R5
                                  249-419-11 s CARBON 1.5K 5% 1/4W
249-422-11 s CARBON 2.7K 5% 1/4W
249-422-11 s CARBON 2.7K 5% 1/4W
249-422-11 s CARBON 2.7K 5% 1/4W
249-422-11 s CARBON 1.5K 5% 1/4W
   R6
R7
R8
R9
R10
                             1-249-411-11 s CARBON 330 5% 1/4W
   R11
                                              -981-00 s RES,
-981-00 s RES,
-981-00 s RES,
-981-00 s RES,
                                                                                      VAR, METAL 5K "H-POSI"
VAR, METAL 5K "WIDTH"
VAR, METAL 5K "V-POSI"
VAR, METAL 5K "HEIGHT"
                                                                                            TOGGLE "CENTER MARKER"
TOGGLE "SAFETY ZONE"
TOGGLE "MIX VF"
TOGGLE "MIX VF"
TOGGLE "UP TALLY"
                                                355-00 s SWITCH,
355-00 s SWITCH,
355-00 s SWITCH,
355-00 s SWITCH,
355-00 s SWITCH,
    S1
S2
S3
S4
S5
                                                 770-11 s SWITCH, TOGGLE "DISPLAY"
197-11 s SWITCH, PUSH(1 KEY) "CALL"
196-11 s SWITCH, ROTARY "CC"
196-11 s SWITCH, ROTARY "ND"
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SW-417 BOARD
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Ref. No. or Q'ty Part No. SP Description
1-632-990-11 o PRINTED CIRCUIT BOARD, SW-417
CN1 1-506-483-21 o CONNECTOR, 4P MALE

SW-389 BOARD

Ref. No. or Q'ty Part No. SP Description

1-633-014-11 o PRINTED CIRCUIT BOARD, SW-389

CN1 1-506-630-11 o CONNECTOR, 30P, MALE
CN2 1-506-486-11 o CONNECTOR, 7P, MALE
CN3 1-506-486-11 o CONNECTOR, 7P, MALE
CN4 1-506-484-11 o CONNECTOR, 5P, MALE
RV1 1-238-214-21 s RES, VAR, CARBON 10K "PGM2"
RV2 1-238-214-21 s RES, VAR, CARBON 10K "INCOM2"
RV3 1-238-214-21 s RES, VAR, CARBON 10K "PGM1"
RV4 1-238-214-21 s RES, VAR, CARBON 10K "PGM1"
RV4 1-238-214-21 s RES, VAR, CARBON 10K "PGM1"

<u>VA-86 BOARD</u>		ARD	(VA-86 BOARD)
	Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
	lpc lpc l8pcs lpc 2pcs	A-7515-064-B o MOUNTED CIRCUIT BOARD, VA-86 2-251-622-00 o LEVER. PC BOARD 3-621-124-00 o SPACER 7-626-317-11 s PIN, SPRING 2.5X6 7-628-254-40 s SCREW +PS 2.6X12	C240
	4pcs	7-682-902-01 s SCREW +PWH 2.6X4	C245 1-163-038-00 s CERAMIC CHIP 0.1MF 25V
	C21 C25 C31 C38 C39	1-163-099-00 s CERAMIC CHIP 18PF 5% 50V 1-124-292-00 s ELECT 33uF 20% 6.3V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V	CN1 1-562-730-11 o CONNECTOR, MULTI 90P, MALE D1 8-719-921-12 s DIODE HZZBLL D2 8-719-101-64 s DIODE RD6.8EL2 D3 8-719-118-38 s DIODE ISZ46A D4 8-719-101-64 s DIODE RD6.8EL2
	C58 C65 C79 C80 C106	1-124-292-00 s ELECT 33uF 20% 6.3V 1-163-099-00 s CERAMIC CHIP 18PF 5% 50V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-099-00 s CERAMIC CHIP 18PF 5% 50V	D6 8-719-104-31 s DIODE 1S2838 D7 8-719-104-34 s DIODE 1S2836 D8 8-719-104-34 s DIODE 1S2836 D10 8-719-104-31 s DIODE 1S2838
	C109 C115 C122 C123 C145	1-124-292-00 s ELECT 33uF 20% 6.3V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-164-309-91 s CERAMIC 0.001uF 1% 50V	D11 8-719-104-31 s DIODE 1S2838 D13 8-719-104-34 s DIODE 1S2836 D15 8-719-104-31 s DIODE 1S2838 D16 8-719-800-76 s DIODE 1SS226 D17 8-719-800-76 s DIODE 1SS226 D18 8-719-800-76 s DIODE 1SS226
	C150 C152 C165 C166 C167	1-130-471-00 s MYLAR 0.001uF 5% 50V 1-163-263-11 s CERAMIC CHIP 330PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V	D19 8-719-400-18 s DIODE MA152WK FL1 1-239-038-11 s FILTER, TRAP 14.3MHz FL2 1-239-038-11 s FILTER, TRAP 14.3MHz FL3 1-239-038-11 s FILTER, TRAP 14.3MHz
	C168 C169 C170 C171 C172	1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V	IC1 8-759-906-54 s IC TL064CNS IC2 8-741-108-20 s IC BX1082 IC3 1-807-422-11 s IC BH-1217 IC4 8-759-981-51 s IC RC1496M IC5 8-741-108-20 s IC BX1082
	C173 C174 C175 C176 C177	1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-037-11 s CERAMIC CHIP 0.022uF 10% 25V	IC6 8-759-981-51 s IC RC1496M IC7 8-759-009-07 s IC MC14053BF IC8 8-759-100-97 s IC UPC339G2 IC9 8-741-108-20 s IC BX1082 IC10 8-759-030-16 s IC MC34182M
	C179 C180 C182 C183 C184	1-163-037-11 s CERAMIC CHIP 0.022uF 10% 25V 1-163-037-11 s CERAMIC CHIP 0.022uF 10% 25V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V 1-130-495-00 s MYLAR 0.1uF 5% 50V 1-130-491-00 s MYLAR 0.047uF 5% 50V	$ \begin{array}{llllllllllllllllllllllllllllllllllll$
	C186 C201 C202 C203 C214	1-130-483-00 s MYLAR 0.01uF 5% 50V 1-163-251-11 s CERAMIC 100PF 5% 50V 1-163-251-11 s CERAMIC 100PF 5% 50V 1-163-251-11 s CERAMIC 100PF 5% 50V 1-135-164-21 s TANTALUM CHIP 22uF 10% 20V	IC16 1-807-422-11 s IC BH-1217 IC17 8-759-981-51 s IC RC1496M IC18 8-741-108-20 s IC BX1082 IC19 8-759-981-51 s IC RC1496M IC20 8-759-008-74 s IC MC14001BF
	C215 C216 C217 C218 C219	1-135-164-21 s TANTALUM CHIP 22uF 10% 20V 1-135-164-21 s TANTALUM CHIP 22uF 10% 20V 1-135-161-21 s TANTALUM CHIP 22uF 10% 10V 1-135-161-21 s TANTALUM CHIP 22uF 10% 10V 1-135-161-21 s TANTALUM CHIP 22uF 10% 10V	IC21 8-759-009-07 s IC MC14053BF IC22 8-759-009-04 s IC MC14050BF IC23 8-759-009-04 s IC MC14050BF IC24 8-759-209-57 s IC TC4S69F IC25 8-759-906-54 s IC TL064CNS
	C223 C224 C225 C226 C227	1-102-942-00 s CERAMIC 5PF 1PF 50V 1-102-942-00 s CERAMIC 5PF 1PF 50V 1-102-961-00 s CERAMIC 27PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V	IC26 8-759-013-96 s IC MC74HC4316F IC27 8-759-906-54 s IC TL064CNS IC28 8-759-906-54 s IC TL064CNS IC32 8-759-147-84 s IC CXD80720 IC33 8-759-204-90 s IC TC40H374F
	C228 C229	1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-124-287-00 s ELECT 10uF 20% 10V	IC34 8-759-209-97 s IC TC4S81F IC35 8-759-008-74 s IC MC14001BF

(VA-86 BOARD)		(VA-86 BC	DARD)
Ref. No. or Q'ty Part No. SP Description		Ref. No. or Q'ty	Part No. SP Description
IC36 8-759-994-64 s IC MB88341PF IC37 8-759-979-73 s IC TLC27L4CNS IC38 8-759-009-07 s IC MC14053BF IC39 8-759-009-07 s IC MC14053BF IC40 8-759-979-73 s IC TLC27L4CNS		Q51 Q52 Q53 Q54 Q55	8-729-216-22 s TRANSISTOR 2SA1162 8-729-116-06 s TRANSISTOR 2SK160-K6 8-729-116-06 s TRANSISTOR 2SK160-K6 8-729-109-44 s TRANSISTOR 2SK94 8-729-109-44 s TRANSISTOR 2SK94
IC41 8-759-906-54 s IC TL064CNS IC42 8-759-979-73 s IC TLC27L4CNS IC43 8-759-979-73 s IC TLC27L4CNS IC44 8-759-009-07 s IC MC14053BF IC45 8-759-906-54 s IC TL064CNS	er en	Q56 Q57 Q58 Q59 Q60	8-729-421-71 s TRANSISTOR 2SK620 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-122-63 s TRANSISTOR 2SA1226 8-729-100-66 s TRANSISTOR 2SC1623
IC46 8-759-030-16 s IC MC34182M IC47 8-759-030-16 s IC MC34182M IC48 8-759-209-90 s IC TC4571F		Q61 Q63 Q64 Q65	8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162 8-729-100-66 s TRANSISTOR 2SC1623
Q1 8-729-105-29 s TRANSISTOR 2SA1385 Q2 8-729-105-19 s TRANSISTOR 2SC3518 Q3 8-729-105-29 s TRANSISTOR 2SA1385 Q4 8-729-200-87 s TRANSISTOR 2SC2714Y Q5 8-729-200-87 s TRANSISTOR 2SC2714Y		Q67 Q68 Q69	8-729-100-66 s TRANSISTOR 2SC1623 8-729-421-71 s TRANSISTOR 2SK620 8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162
06 8-729-122-63 s TRANSISTOR 2SA1226 07 8-729-200-87 s TRANSISTOR 2SC2714Y 08 8-729-109-44 s TRANSISTOR 2SK94 09 8-729-109-44 s TRANSISTOR 2SK94 010 8-729-109-44 s TRANSISTOR 2SK94			8-729-216-22 s TRANSISTOR 2SA1162 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-122-63 s TRANSISTOR 2SC2714Y 8-729-129-63 s TRANSISTOR 2SC2714Y 8-729-109-44 s TRANSISTOR 2SK94
Q11 8-729-109-44 s TRANSISTOR 2SK94 Q12 8-729-200-87 s TRANSISTOR 2SC2714Y Q13 8-729-216-22 s TRANSISTOR 2SA1162 Q14 8-729-216-22 s TRANSISTOR 2SA1162 Q15 8-729-216-22 s TRANSISTOR 2SA1162		077 078 079 080	8-729-109-44 s TRANSISTOR ZSK94 8-729-109-44 s TRANSISTOR ZSK94 8-729-109-44 s TRANSISTOR ZSK94 8-729-200-87 s TRANSISTOR ZSC2714Y 8-729-216-22 s TRANSISTOR ZSA1162
Q16 8-729-116-06 s TRANSISTOR 2SK160-K6 Q17 8-729-116-06 s TRANSISTOR 2SK160-K6 Q18 8-729-109-44 s TRANSISTOR 2SK94 Q19 8-729-109-44 s TRANSISTOR 2SK94 Q20 8-729-421-71 s TRANSISTOR 2SK620		Q84	8-729-216-22 s TRANSISTOR ZSA1162 8-729-216-22 s TRANSISTOR ZSA1162 8-729-116-06 s TRANSISTOR ZSK160-K6 8-729-109-44 s TRANSISTOR ZSK94 8-729-109-44 s TRANSISTOR ZSK94
Q21 8-729-200-87 s TRANSISTOR 2SC2714Y Q22 8-729-200-87 s TRANSISTOR 2SC2714Y Q23 8-729-122-63 s TRANSISTOR 2SA1226 Q24 8-729-200-87 s TRANSISTOR 2SC2714Y Q25 8-729-200-87 s TRANSISTOR 2SC2714Y		Q87 Q88 Q89	8-729-109-44 s TRANSISTOR 2SK94 8-729-421-71 s TRANSISTOR 2SK620 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-200-87 s TRANSISTOR 2SC2714Y 8-729-122-63 s TRANSISTOR 2SA1226
Q28 8-729-216-22 s TRANSISTOR 2SA1162 Q29 8-729-216-22 s TRANSISTOR 2SA1162 Q30 8-729-100-66 s TRANSISTOR 2SC1623 Q31 8-729-100-66 s TRANSISTOR 2SC1623 Q32 8-729-421-71 s TRANSISTOR 2SK620		Q91 Q93 Q94 Q95	8-729-100-66 s TRANSISTOR ZSC1623 8-729-216-22 s TRANSISTOR ZSA1162 8-729-216-22 s TRANSISTOR ZSA1162 8-729-100-66 s TRANSISTOR ZSC1623 8-729-100-66 s TRANSISTOR ZSC1623
Q33 8-729-100-66 s TRANSISTOR 2SC1623 Q34 8-729-216-22 s TRANSISTOR 2SA1162 Q35 8-729-216-22 s TRANSISTOR 2SA1162 Q39 8-729-200-87 s TRANSISTOR 2SC2714Y Q40 8-729-200-87 s TRANSISTOR 2SC2714Y		Q97 Q98 Q99 Q100	8-729-421-71 s TRANSISTOR 2SK620 8-729-216-22 s TRANSISTOR 2SA1162 8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162
Q41 8-729-200-87 s TRANSISTOR 2SC2714Y Q42 8-729-122-63 s TRANSISTOR 2SA1226 Q43 8-729-200-87 s TRANSISTOR 2SC2714Y Q44 8-729-109-44 s TRANSISTOR 2SK94 Q45 8-729-109-44 s TRANSISTOR 2SK94		Q102 Q103 Q104 Q105	8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-100-66 s TRANSISTOR 2SC1623 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162
Q46 8-729-109-44 s TRANSISTOR 2SK94 Q47 8-729-109-44 s TRANSISTOR 2SK94 Q48 8-729-200-87 s TRANSISTOR 2SC2714Y Q49 8-729-216-22 s TRANSISTOR 2SA1162 Q50 8-729-216-22 s TRANSISTOR 2SA1162		Q107 Q108 Q109 Q110 Q111	8-729-100-66 s TRANSISTOR 2SC1623 8-729-901-06 s TRANSISTOR DTA144EK-46 8-729-901-06 s TRANSISTOR DTA144EK-46 8-729-901-06 s TRANSISTOR DTA144EK-46 8-729-901-06 s TRANSISTOR DTA144EK-46
		Q112	8-729-100-66 s TRANSISTOR 2SC1623

(VA-86 BOARD)		(VA-86 B	DARD)
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description
Q113	8-729-421-71 s TRANSISTOR 2SK620	R57	1-216-635-11 s METAL CHIP 220 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
Q114	8-729-100-66 s TRANSISTOR 2SC1623	R61	
Q115	8-729-421-71 s TRANSISTOR 2SK620	R62	
Q116	8-729-100-66 s TRANSISTOR 2SC1623	R63	
Q117	8-729-421-71 s TRANSISTOR 2SK620	R64	
0118	8-729-216-22 s TRANSISTOR 2SA1162	R65	1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K-0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W
0119	8-729-100-66 s TRANSISTOR 2SC1623	R70	
0120	8-729-100-66 s TRANSISTOR 2SC1623	R71	
0121	8-729-100-66 s TRANSISTOR 2SC1623	R74	
0140	8-729-100-66 s TRANSISTOR 2SC1623	R75	
0141 0142 0143 0144	8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623 8-729-100-66 s TRANSISTOR 2SC1623	R76 R77 R78 R79 R80	1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W
R1	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W	R81	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W
R2	1-216-662-11 s METAL CHIP 3K 0.50% 1/10W	R82	
R3	1-216-691-11 s METAL CHIP 47K 0.50% 1/10W	R83	
R4	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R84	
R5	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R85	
R6	1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W	R86	1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W 1-216-686-11 s METAL CHIP 30K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W
R7	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W	R87	
R8	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R88	
R9	1-216-677-11 s METAL CHIP 12K 0.50% 1/10W	R90	
R10	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	R91	
R11	1-216-649-11 s METAL CHIP 820 0.50% 1/10W	R92	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-688-11 s METAL CHIP 36K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W
R12	1-216-699-11 s METAL CHIP 100K 0.50% 1/10W	R93	
R13	1-216-689-11 s METAL CHIP 39K 0.50% 1/10W	R94	
R15	1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W	R95	
R16	1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W	R96	
R17	1-216-677-11 s METAL CHIP 12K 0.50% 1/10W	R97	1-216-659-11 s METAL CHIP 2. 2K 0.50% 1/10W 1-216-635-11 s METAL CHIP 220 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-631-11 s METAL CHIP 150 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W
R18	1-216-645-11 s METAL CHIP 560 0.50% 1/10W	R98	
R19	1-216-645-11 s METAL CHIP 560 0.50% 1/10W	R101	
R20	1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W	R102	
R21	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R103	
R22	1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W	R104	1-216-631-11 s METAL CHIP 150 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R23	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W	R105	
R24	1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W	R106	
R25	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	R107	
R26	1-216-639-11 s METAL CHIP 330 0.50% 1/10W	R108	
R27	1-216-637-11 s METAL CHIP 270 0.50% 1/10W	R109	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R28	1-216-656-11 s METAL CHIP 1.6K 0.50% 1/10W	R110	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R31	1-216-648-11 s METAL CHIP 750 0.50% 1/10W	R111	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R34	1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	R113	1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W
R35	1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W	R114	1-216-641-11 s METAL CHIP 390 0.50% 1/10W
R37	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R116	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W
R38	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W	R117	1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W
R39	1-216-687-11 s METAL CHIP 33K 0.50% 1/10W	R118	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
R40	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W	R119	1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W
R41	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	R120	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R42	1-216-662-11 s METAL CHIP 3K 0.50% 1/10W	R121	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R43	1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W	R122	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R44	1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W	R125	1-216-619-11 s METAL CHIP 47 0.50% 1/10W
R45	1-216-635-11 s METAL CHIP 220 0.50% 1/10W	R128	1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W
R47	1-216-621-11 s METAL CHIP 56 0.50% 1/10W	R131	1-216-627-11 s METAL CHIP 100 0.50% 1/10W
R48 R49 R53 R54 R55	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-650-11 s METAL CHIP 910 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W	R132 R140 R141 R142	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-649-11 s METAL CHIP 820 0.50% 1/10W 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W

(VA-86 BOARD)	(VA-86 BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R143 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W R145 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R146 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W R147 1-216-645-11 s METAL CHIP 3.6K 0.50% 1/10W R148 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W	R224 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R226 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R227 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R228 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R229 1-216-675-11 s METAL CHIP 1.0K 0.50% 1/10W
R149 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R150 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R151 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R152 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R153 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W	R230 1-216-688-11 s METAL CHIP 36K 0.50% 1/10W R231 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R232 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R233 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R234 1-216-635-11 s METAL CHIP 220 0.50% 1/10W
R154 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W R155 1-216-639-11 s METAL CHIP 330 0.50% 1/10W R156 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R157 1-216-678-11 s METAL CHIP 13K 0.50% 1/10W R158 1-216-637-11 s METAL CHIP 270 0.50% 1/10W	R237 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R238 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R240 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R241 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R242 1-216-631-11 s METAL CHIP 150 0.50% 1/10W
R160 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R161 1-216-648-11 s METAL CHIP 750 0.50% 1/10W R165 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R166 1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W R169 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R243 1-216-656-11 s METAL CHIP 1.6K 0.50% 1/10W R245 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R246 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R247 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R248 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R170 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R171 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R172 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R173 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R174 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W	R249 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R250 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R252 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R253 1-216-641-11 s METAL CHIP 390 0.50% 1/10W R254 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R175 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R176 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R177 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R179 1-216-621-11 s METAL CHIP 26 0.50% 1/10W R180 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W	R256 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W R257 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W R258 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R259 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R260 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R181 1-216-650-11 s METAL CHIP 910 0.50% 1/10W R185 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R187 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R189 1-216-635-11 s METAL CHIP 2.7K 0.50% 1/10W R190 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W	R261 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R262 1-216-631-11 s METAL CHIP 15O 0.50% 1/10W R263 1-216-631-11 s METAL CHIP 15O 0.50% 1/10W R264 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R265 1-216-649-11 s METAL CHIP 820 0.50% 1/10W
R193 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R194 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R196 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R197 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R200 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W	R266 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R267 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W R268 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R269 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W R271 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W
R203 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R204 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R207 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W R208 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W R209 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W	R272 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R273 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R274 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R275 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R276 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W
R210 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R211 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R212 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R213 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R214 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	R277 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W R278 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R279 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W R280 1-216-639-11 s METAL CHIP 330 0.50% 1/10W R281 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W
R215 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R216 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R217 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R218 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W R219 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W	R282 1-216-648-11 s METAL CHIP 750 0.50% 1/10W R285 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R288 1-216-637-11 s METAL CHIP 270 0.50% 1/10W R289 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R290 1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W
R220 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W R221 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W R222 1-216-686-11 s METAL CHIP 30K 0.50% 1/10W R223 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W	R293 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R294 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R295 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R296 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W

(VA-86 BOARD)	(VA-86 BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q ty Part No. SP Description
R297 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R298 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R299 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R300 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R302 1-216-621-11 s METAL CHIP 56 0.50% 1/10W	R376 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W R377 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R378 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R380 1-216-667-11 s METAL CHIP 2.K 0.50% 1/10W R381 1-216-659-11 s METAL CHIP 2.ZK 0.50% 1/10W
R303 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R304 1-216-650-11 s METAL CHIP 910 0.50% 1/10W R308 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R310 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R312 1-216-635-11 s METAL CHIP 220 0.50% 1/10W	R384 1-216-656-11 s METAL CHIP 1.6K 0.50% 1/10W R388 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R389 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R390 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R394 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R313 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R316 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R317 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R319 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R320 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W	R395 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W R402 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R403 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R426 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W R428 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W
R323 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R326 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R327 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R330 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W R331 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W	R429 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R430 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R431 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R438 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R439 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R332 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R333 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R334 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R335 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R336 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R441 1-216-619-11 s METAL CHIP 47 0.50% 1/10W R458 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R459 1-216-619-11 s METAL CHIP 47 0.50% 1/10W R462 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R463 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W
R337 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R338 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R339 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R340 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R341 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W	R465 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R467 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R469 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R471 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R473 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W
R342 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W R343 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W R344 1-216-686-11 s METAL CHIP 30K 0.50% 1/10W R346 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R347 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W	R491 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R492 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R493 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R494 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R495 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W
R348 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R349 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R350 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R351 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R352 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R496 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R507 1-216-678-11 s METAL CHIP 13K 0.50% 1/10W R509 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R510 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R511 1-216-696-11 s METAL CHIP 75K 0.50% 1/10W
R353 1-216-688-11 s METAL CHIP 36K 0.50% 1/10W R354 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R355 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R356 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R359 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W	R512 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R513 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R514 1-216-699-11 s METAL CHIP 10OK 0.50% 1/10W R515 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R516 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W
R360 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R361 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R362 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R363 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R364 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R517 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R540 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R541 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W R543 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R544 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W
R365 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R366 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R367 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R368 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R369 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R546 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R547 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W R550 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R553 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R554 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R370 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R371 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R373 1-216-641-11 s METAL CHIP 390 0.50% 1/10W R375 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W	R556 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R557 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R567 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R568 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W

(VA-86 B	OARD)
Ref. No. or Q'ty	Part No. SP Description
R569 R587 R588 R589 R590	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-673-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-665-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W
R591 R592 R599 R600 R601	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W
R615 R616 R617 R634 R635	1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-611-11 s METAL CHIP 22 0.50% 1/10W 1-216-611-11 s METAL CHIP 22 0.50% 1/10W
R636	1-216-611-11 s METAL CHIP 22 0.50% 1/10W
RV1	1-228-456-00 s RES, ADJ, METAL 1K
RV2	1-228-472-00 s RES, ADJ, METAL 2K
RV4	1-228-462-00 s RES, ADJ, METAL 100K
RV5	1-228-462-00 s RES, ADJ, METAL 100K
RV6	1-228-474-00 s RES, ADJ, METAL 10K
RV7	1-228-457-00 s RES, ADJ, METAL 2K
RV8	1-228-462-00 s RES, ADJ, METAL 100K
RV9	1-228-462-00 s RES, ADJ, METAL 100K
RV10	1-228-474-00 s RES, ADJ, METAL 10K
RV11	1-228-457-00 s RES, ADJ, METAL 2K
RV12	1-228-472-00 s RES, ADJ, METAL 2K
RV14	1-228-462-00 s RES, ADJ, METAL 100K
RV15	1-228-462-00 s RES, ADJ, METAL 100K
RV16	1-228-474-00 s RES, ADJ, METAL 10K
RV17	1-228-457-00 s RES, ADJ, METAL 2K
RV18	1-228-459-00 s RES, ADJ, METAL 10K
RV19	1-228-459-00 s RES, ADJ, METAL 10K
RV20	1-228-471-00 s RES, ADJ, METAL 1K
RV21	1-228-477-00 s RES, ADJ, METAL 10OK
RV22	1-228-477-00 s RES, ADJ, METAL 10OK
RV23	1-228-477-00 s RES, ADJ, METAL 100K
RV24	1-228-463-00 s RES, ADJ, METAL 200K
RV25	1-228-463-00 s RES, ADJ, METAL 200K
RV26	1-228-463-00 s RES, ADJ, METAL 200K
RV28	1-228-459-00 s RES, ADJ, METAL 10K
RV29	1-228-459-00 s RES, ADJ, METAL 10K
RV30	1-228-459-00 s RES, ADJ, METAL 10K
RV31	1-228-460-00 s RES, ADJ, METAL 20K
RV32	1-228-460-00 s RES, ADJ, METAL 20K
RV33	1-228-460-00 s RES, ADJ, METAL 20K
RV34	1-228-459-00 s RES, ADJ, METAL 10K
RV35	1-228-459-00 s RES, ADJ, METAL 10K
RV36	1-228-459-00 s RES, ADJ, METAL 10K
RV37	1-228-462-00 s RES, ADJ, METAL 100K
RV38	1-228-462-00 s RES, ADJ, METAL 100K
RV39	1-228-462-00 s RES, ADJ, METAL 100K
RV40	1-228-462-00 s RES, ADJ, METAL 100K
RV41	1-228-462-00 s RES, ADJ, METAL 100K
RV42	1-228-462-00 s RES, ADJ, METAL 100K
RV43	1-228-459-00 s RES, ADJ, METAL 10K

(VA-86 B	OARD)			
Ref. No. or Q'ty	Part No.	SP Des	criptio	n
RV46 RV47 RV48 RV49 RV51	1-228-460- 1-228-460- 1-228-460- 1-228-472- 1-228-457-	00 s RES 00 s RES 00 s RES 00 s RES 00 s RES	, ADJ, , ADJ, , ADJ.	METAL 20K METAL 20K METAL 20K METAL 2K METAL 2K
RV52 RV54 RV55 RV56 RV57	1-228-461- 1-228-461- 1-228-457- 1-228-461- 1-228-460-	-00 s RES -00 s RES -00 s RES -00 s RES -00 s RES	, ADJ, , ADJ, , ADJ,	METAL 50K METAL 50K METAL 2K METAL 50K METAL 20K
RV58 RV59 RV60 RV61 RV62	1-228-460- 1-228-460- 1-228-461- 1-228-461- 1-228-461-	-00 s RES -00 s RES -00 s RES	, ADJ, , ADJ, , ADJ.	METAL 20K METAL 20K METAL 50K METAL 50K METAL 50K
S1	1-571-975-	-31 s SWI'	TCH, CH	IP

1--228--459--00 s RES, ADJ, METAL 10K 1--228--459--00 s RES, ADJ, METAL 10K

VA-86 B0	ARD Serial No. 40600 - 42700	(VA-86 BOARD)	
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty Part No. SP Description	
lpc lpc 18pcs lpc 2pcs	A-7515-064-A o MOUNTED CIRCUIT BOARD, VA-86 2-251-622-00 o LEVER, PC BOARD 3-621-124-00 o SPACER 7-626-317-11 s PIN, SPRING 2.5X6 7-628-254-40 s SCREW +PS 2.6X12	D7 8-719-104-34 s DIODE 1S2836 D8 8-719-104-34 s DIODE 1S2836 D10 8-719-104-31 s DIODE 1S2838 D11 8-719-104-31 s DIODE 1S2838 D13 8-719-104-34 s DIODE 1S2836	
4pcs	7-682-902-01 s SCREW +PWH 2.6X4	D15 8-719-104-31 s DIODE 1\$2838 D16 8-719-800-76 s DIODE 1\$\$226	
C19 C25 C31 C38	1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V 1-124-292-00 s ELECT 33uF 20% 6.3V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V	D17 8-719-800-76 s DIODE 1SS226 D18 8-719-800-76 s DIODE 1SS226 D19 8-719-400-18 s DIODE MA152WK	
ČŠ8 C62 C79_	1-124-292-00 s ELECT 33uF 20% 6.3V 1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V 1-163-082-00 s CERAMIC CHIP 0.5PF 0.25PF 50V	FL1 1-409-427-11 s FILTER, TRAP 14. FL2 1-409-427-11 s FILTER, TRAP 14. FL3 1-409-427-11 s FILTER, TRAP 14.	3MHz
Č103 C109 C115	1-163-082-00 s CERANIC CHIP 0.5PF 0.25PF 50V 1-124-292-00 s ELECT 33uF 20% 6.3V 1-163-227-11 s CERANIC CHIP 10PF 5% 50V	IC1 8-759-906-54 s IC TL064CNS IC2 8-741-108-20 s IC BX1082 IC3 1-807-422-11 s IC BH-1217 IC4 8-759-981-51 s IC RC1496M	
C122 C145	1-163-227-11 s CERAMIC CHIP 10PF 5% 50V 1-164-309-91 s CERAMIC 0.001uF 1% 50V 1-130-471-00 s MYLAR 0.001uF 5% 50V	IC5 8-741-108-20 s IC BX1082	
Č150 C177 C179	1-163-037-11 s CERAMIC CHIP 0.022uF 10% 25V 1-163-037-11 s CERAMIC CHIP 0.022uF 10% 25V	IC6 8-759-981-51 s IC RC1496M IC7 8-759-009-07 s IC MC14053BF IC8 8-759-100-97 s IC UPC339C2 IC9 8-741-108-20 s IC BX1082	
C180 C183 C184	1-163-037-11 s CERAMIC CHIP 0.022uF 10% 25V 1-130-495-00 s MYLAR 0.1uF 5% 50V 1-130-491-00 s MYLAR 0.047uF_5%_50V	IC10 8-759-030-16 s IC MC34182M IC11 1-807-422-11 s IC BH-1217	
C186 C187	1-130-483-00 s MYLAR 0.01uF 5% 50V 1-163-227-11 s CERAMIC CHIP 10PF 5% 50V	1C12 8-759-981-51 s IC RC1496M IC13 8-741-108-20 s IC BX1082 IC14 8-759-981-51 s IC RC1496M	
C201 C202 C203	1-163-112-00 s CERAMIC 62PF 5% 50V 1-163-112-00 s CERAMIC 62PF 5% 50V 1-163-112-00 s CERAMIC 62PF 5% 50V	1C14 8-759-981-51 s IC RC1496M 1C15 8-741-108-20 s IC BX1082 IC16 1-807-422-11 s IC BH-1217	
C214 C215	1-135-164-21 s TANTALUM CHIP 22uF 10% 20V 1-135-164-21 s TANTALUM CHIP 22uF 10% 20V	IC17 8-759-981-51 s IC RC1496M IC18 8-741-108-20 s IC BX1082	
C216 C217	1-135-164-21 s TANTALUM CHIP 22uF 10% 20V 1-135-161-21 s TANTALUM CHIP 22uF 10% 10V	IC20 8-759-008-74 s IC MC14001BF	
ČŽÍ8 CŽÍ9 CŽŽ3	1-135-161-21 s TANTALUM CHIP 22uF 10% 10V 1-135-161-21 s TANTALUM CHIP 22uF 10% 10V 1-102-942-00 s CERAMIC 5PF 1PF 50V	IC21 8-759-009-07 s IC MC14053BF IC22 8-759-009-04 s IC MC14050BF IC23 8-759-009-04 s IC MC14050BF	
C224 C225	1-102-942-00 s CERAMIC 5PF 1PF 50V 1-102-961-00 s CERAMIC 27PF 5% 50V	1C24 8-759-209-57 s IC TC4S69F IC25 8-759-906-54 s IC TL064CNS	
C226 C227 C228	1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC CHIP 100PF 5% 50V	IC26 8-759-013-96 s IC MC74HC4316F IC27 8-759-906-54 s IC TL064CNS IC28 8-759-906-54 s IC TL064CNS	
	1-124-287-00 s ELECT 10uF 20% 10V	IC32 8-759-147-84 s IC CXD8072Q IC33 8-759-204-90 s IC TC40H374F	
C229 C231 C232 C233 C235	1-135-161-21 s TANTALUM CHIP 22MF 10% 10V 1-135-161-21 s TANTALUM CHIP 22MF 10% 10V 1-135-161-21 s TANTALUM CHIP 22MF 10% 10V 1-135-217-21 s TANTALUM CHIP 15MF 10% 6.3V	IC34 8-759-209-97 s IC TC4S81F IC35 8-759-008-74 s IC MC14001BF	
	1-135-217-21 s TANTALUM CHIP 15MF 10% 6.3V	IC36 8-759-994-64 s IC MB88341PF IC37 8-759-979-73 s IC TLC27L4CNS IC38 8-759-009-07 s IC MC14053BF	
C237 C239 C240 C241	1-135-217-21 s TANTALUM CHIP 15MF 10% 6.3V 1-102-961-00 s CERAMIC 27PF 5% 50V 1-102-961-00 s CERAMIC 27PF 5% 50V	IC39 8-759-009-07 s IC MC14053BF IC40 8-759-979-73 s IC TLC27L4CNS	
C242	1-102-961-00 s CERAMIC 27PF 5% 50V	1C41 8-759-906-54 s IC TL064CNS 1C42 8-759-979-73 s IC TLC27L4CNS	
CNÍ D1	1-562-730-11 o CONNECTOR, MULTI 90P, MALE 8-719-921-12 s DIODE HZZBLL	IC43 8-759-979-73 s IC TLC27L4CNS IC44 8-759-009-07 s IC MC14053BF	
D1 D2 D3 D4 D6	8-719-101-64 s DIODE RD6.8EL2 8-719-118-38 s DIODE 1SZ46A 8-719-101-64 s DIODE RD6.8EL2	ÎČÂŜ 8-759-906-54 s ĨĊ TLŌĜAĊNS IC46 8-759-030-16 s IC MC34182M IC47 8-759-030-16 s <u>IC MC34182</u> M	
Ďē	8-719-104-31 s DIODE 152838	1C48 8-759-209-90 s 1C TC4S71F	

(VA-86 BOARD)		(VA-86 BOARD)	
Ref. No. or Q'ty Part No. SP Description	Fi C	Ref. No. or Q'ty Part No. SP Description	
Q1 8-729-105-29 s TRANSISTOR 2SA Q2 8-729-105-19 s TRANSISTOR 2SA Q3 8-729-105-29 s TRANSISTOR 2SA Q4 8-729-200-87 s TRANSISTOR 2SA Q5 8-729-200-87 s TRANSISTOR 2SA	GA 1385 GC 2714Y (Q66 8-729-100-66 s TRANSISTOR 2SC1623 Q67 8-729-421-71 s TRANSISTOR 2SK620 Q68 8-729-100-66 s TRANSISTOR 2SC1623 Q69 8-729-216-22 s TRANSISTOR 2SA1162 Q70 8-729-216-22 s TRANSISTOR 2SA1162	
Q6 8-729-122-63 s TRANSISTOR 2SA Q7 8-729-200-87 s TRANSISTOR 2SA Q8 8-729-109-44 s TRANSISTOR 2SA Q9 8-729-109-44 s TRANSISTOR 2SA Q10 8-729-109-44 s TRANSISTOR 2SA	K94 (Q71 8-729-200-87 s TRANSISTOR 2SC2714\\ Q72 8-729-200-87 s TRANSISTOR 2SC2714\\ Q73 8-729-122-63 s TRANSISTOR 2SA1226\\ Q74 8-729-200-87 s TRANSISTOR 2SC2714\\ Q75 8-729-109-44 s TRANSISTOR 2SK94	Y
Q11 8-729-109-44 s TRANSISTOR 2SI Q12 8-729-200-87 s TRANSISTOR 2SI Q13 8-729-216-22 s TRANSISTOR 2SI Q14 8-729-216-22 s TRANSISTOR 2SI Q15 8-729-216-22 s TRANSISTOR 2SI Q15 8-729-216-22 s TRANSISTOR 2SI	MIIDZ f	Q76 8-729-109-44 s TRANSISTOR 2SK94 Q77 8-729-109-44 s TRANSISTOR 2SK94 Q78 8-729-109-44 s TRANSISTOR 2SK94 Q79 8-729-200-87 s TRANSISTOR 2SC2714) Q80 8-729-216-22 s TRANSISTOR 2SA1162	Y
Q16 8-729-116-06 s TRANSISTOR 2SI Q17 8-729-116-06 s TRANSISTOR 2SI Q18 8-729-109-44 s TRANSISTOR 2SI Q19 8-729-109-44 s TRANSISTOR 2SI Q20 8-729-421-71 s TRANSISTOR 2SI	K160-K6 K94 (K94 (Q81 8-729-216-22 s TRANSISTOR 2SA1162 Q82 8-729-216-22 s TRANSISTOR 2SA1162 Q83 8-729-116-06 s TRANSISTOR 2SK160-M Q84 8-729-116-06 s TRANSISTOR 2SK160-M Q85 8-729-109-44 s TRANSISTOR 2SK94	K6 K6
Q21 8-729-200-87 s TRANSISTOR 2SI Q22 8-729-200-87 s TRANSISTOR 2SI Q23 8-729-122-63 s TRANSISTOR 2SI Q24 8-729-200-87 s TRANSISTOR 2SI Q25 8-729-200-87 s TRANSISTOR 2SI	C2714Y CA1226 C2714Y	Q86 8-729-109-44 s TRANSISTOR 2SK94 Q87 8-729-421-71 s TRANSISTOR 2SK620 Q88 8-729-200-87 s TRANSISTOR 2SC2714) Q89 8-729-200-87 s TRANSISTOR 2SC2714) Q90 8-729-122-63 s TRANSISTOR 2SA1226	Y Y
Q28 8-729-216-22 s TRANSISTOR 2S. Q29 8-729-216-22 s TRANSISTOR 2S. Q30 8-729-100-66 s TRANSISTOR 2S. Q31 8-729-100-66 s TRANSISTOR 2S. Q32 8-729-421-71 s TRANSISTOR 2S.	SC1623 SC1623	Q91 8-729-100-66 s TRANSISTOR 2SC1623 Q93 8-729-216-22 s TRANSISTOR 2SA1162 Q94 8-729-216-22 s TRANSISTOR 2SA1162 Q95 8-729-100-66 s TRANSISTOR 2SC1623 Q96 8-729-100-66 s TRANSISTOR 2SC1623	
Q33 8-729-100-66 s TRANSISTOR 2SG Q34 8-729-216-22 s TRANSISTOR 2SG Q35 8-729-216-22 s TRANSISTOR 2SG Q39 8-729-200-87 s TRANSISTOR 2SG Q40 8-729-200-87 s TRANSISTOR 2SG	6C2714Y (Q97 8-729-421-71 s TRANSISTOR 2SK620 Q98 8-729-216-22 s TRANSISTOR 2SA1162 Q99 8-729-100-66 s TRANSISTOR 2SC1623 Q100 8-729-216-22 s TRANSISTOR 2SA1162 Q101 8-729-100-66 s TRANSISTOR 2SC1623	
Q41 8-729-200-87 s TRANSISTOR 2SI Q42 8-729-122-63 s TRANSISTOR 2SI Q43 8-729-200-87 s TRANSISTOR 2SI Q44 8-729-109-44 s TRANSISTOR 2SI Q45 8-729-109-44 s TRANSISTOR 2SI	GA1226 GC2714Y G GK94 G	Q102 8-729-216-22 s TRANSISTOR 2SA1162 Q103 8-729-100-66 s TRANSISTOR 2SC1623 Q104 8-729-216-22 s TRANSISTOR 2SA1162 Q105 8-729-216-22 s TRANSISTOR 2SA1162 Q107 8-729-100-66 s TRANSISTOR 2SC1623	
Q46 8-729-109-44 s TRANSISTOR 2SI Q47 8-729-109-44 s TRANSISTOR 2SI Q48 8-729-200-87 s TRANSISTOR 2SI Q49 8-729-216-22 s TRANSISTOR 2SI Q50 8-729-216-22 s TRANSISTOR 2SI	K94 C2714Y SA1162	Q108 8-729-901-06 s TRANSISTOR DTA144EK Q109 8-729-901-06 s TRANSISTOR DTA144EK Q110 8-729-901-06 s TRANSISTOR DTA144EK Q111 8-729-901-06 s TRANSISTOR DTA144EK Q112 8-729-100-66 s TRANSISTOR 2SC1623	(-46 (-46
Q51 8-729-216-22 s TRANSISTOR 2S, Q52 8-729-116-06 s TRANSISTOR 2S, Q53 8-729-116-06 s TRANSISTOR 2S, Q54 8-729-109-44 s TRANSISTOR 2S, Q55 8-729-109-44 s TRANSISTOR 2S,	K160-K6 K160-K6 K94	Q113 8-729-421-71 s TRANSISTOR 2SK620 Q114 8-729-100-66 s TRANSISTOR 2SC1623 Q115 8-729-421-71 s TRANSISTOR 2SK620 Q116 8-729-100-66 s TRANSISTOR 2SC1623 Q117 8-729-421-71 s TRANSISTOR 2SK620	
Q56 8-729-421-71 s TRANSISTOR 2SI Q57 8-729-200-87 s TRANSISTOR 2SI Q58 8-729-200-87 s TRANSISTOR 2SI Q59 8-729-122-63 s TRANSISTOR 2SI Q60 8-729-100-66 s TRANSISTOR 2SI	C2714Y C2714Y C A1226 C	0118 8-729-216-22 s TRÁNSISTOR 2SA1162 0119 8-729-100-66 s TRANSISTOR 2SC1623 0120 8-729-100-66 s TRANSISTOR 2SC1623 0121 8-729-100-66 s TRANSISTOR 2SC1623 0140 8-729-100-66 s TRANSISTOR 2SC1623	
Q61 8-729-100-66 s TRANSISTOR 2SG Q63 8-729-216-22 s TRANSISTOR 2SG Q64 8-729-216-22 s TRANSISTOR 2SG Q65 8-729-100-66 s TRANSISTOR 2SG	SA1162 Q SA1162 Q	2141 8-729-100-66 s TRANSISTOR 2SC1623 2142 8-729-100-66 s TRANSISTOR 2SC1623 2143 8-729-100-66 s TRANSISTOR 2SC1623 2144 8-729-100-66 s TRANSISTOR 2SC1623	

(VA-86 B	OARD)	(VA-86 B	GOARD)
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description
R1	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W	R77 R78	1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W
R2 R3 R4 R5 R6	1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W	R79 R80 R81	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W
R7	The state of the s	R82 R83 R84	1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W
R8 R9 R10 R11	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W	R85 R86 R87	1-216-689-11 s METAL CHIP 39K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W 1-216-686-11 s METAL CHIP 30K 0.50% 1/10W
R12		R88 R90 R91	1-216-687-11 s METAL CHIP 33K 0.50% 1/10W 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W
R13 R14 R15	1-216-699-11 s METAL CHIP 100K 0.50% 1/10W 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W	R92	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R16 R17	1-216-677-11 s METAL CHIP 12K 0.50% 1/10W	R93 R94 R95	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-688-11 s METAL CHIP 36K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1/216-669-11 s METAL CHIP 5.6K 0.50% 1/210W 1/21
R18 R19 R20	1-216-648-11 s METAL CHIP 750 0.50% 1/10W 1-216-645-11 s METAL CHIP 560 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W	R96 R97	1-216-659-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W
R21	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W	R98 R101 R102	1-216-635-11 s METAL CHIP 220 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-631-11 s METAL CHIP 150.0.50% 1/10W
R22 R23 R24	1-216-686-11 s METAL CHIP 30K 0.50% 1/10W 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	R103 R104	1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-631-11 s METAL CHIP 150 0.50% 1/10W
R25 R26	1-216-639-11 s METAL CHIP 330 0.50% 1/10W	R105 R106	1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W
R27 R28 R31	1-216-637-11 s METAL CHIP 270 0.50% 1/10W 1-216-656-11 s METAL CHIP 1.6K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	R107 R108 R109	1-216-675-11 s MĒTAL CHIP TOK 0,50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R34 R35	1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W	R110 R111	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R37 R38 R39	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W	R112 R113 R114	1-247-903-00 s CARBON 1M 5% 1/4W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W 1-216-641-11 s METAL CHIP 390 0.50% 1/10W
R40 R41	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	R116 R117	1-216-685-11 s MFTAI CHIP 27K O 50% 1/10W
R42 R43	1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W	R118 R119	1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W
R44 R45 R47	1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W 1-216-635-11 s METAL CHIP 220 0.50% 1/10W 1-216-621-11 s METAL CHIP 56 0.50% 1/10W	R120 R121	1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R48 R49	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-650-11 s METAL CHIP 910 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W	R122 R125 R128	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-619-11 s METAL CHIP 47 0.50% 1/10W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W
R49 R53 R54 R55	1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W	R131 R132	1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R57 R60	1-216-635-11 s METAL CHIP 220 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W	R140 R141 R142	1-216-651-11 s METAL CHIP 1K 0.50% 1/10W 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W
R61 R62 R63	1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W	R143 R144	1-216-689-11 s METAL CHIP 39K 0.50% 1/10W
R64	1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W	R145 R146	1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W 1-216-648-11 s METAL CHIP 750 0.50% 1/10W 1-216-648-11 s METAL CHIP 7
R65 R70 R71	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W	R147 R148	1-210-05/-11 s METAL CHIP 1.8K 0.50% 1/10W
Ř74 R75		R149 R150 R151	1-216-645-11 s METAL CHIP 560 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
R76	1-216-658-11 s METAL CHIP 2K 0.50% 1/10W 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W	R152	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W

(VA-86 BOARD)	(VA-86 BOARD)		
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description		
R153 1-216-686-11 s METAL CHIP 30K 0.50% 1/10W R154 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W R155 1-216-639-11 s METAL CHIP 330 0.50% 1/10W R156 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R157 1-216-678-11 s METAL CHIP 13K 0.50% 1/10W	R233 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R234 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R237 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R238 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R240 1-216-631-11 s METAL CHIP 150 0.50% 1/10W		
R158 1-216-637-11 s METAL CHIP 270 0.50% 1/10W R160 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R161 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R165 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R166 1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W	R241 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R242 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R243 1-216-656-11 s METAL CHIP 1.6K 0.50% 1/10W R245 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R246 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W		
R169 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R170 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R171 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R172 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R173 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W	R247 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R248 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R249 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R250 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R251 1-247-903-00 s CARBON 1M 5% 1/4W		
R174 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W R175 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R176 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R177 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R179 1-216-621-11 s METAL CHIP 56 0.50% 1/10W	R252 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R253 1-216-641-11 s METAL CHIP 390 0.50% 1/10W R254 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R256 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R257 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W		
R180 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R181 1-216-650-11 s METAL CHIP 910 0.50% 1/10W R185 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R187 1-216-651-11 s METAL CHIP 2.7K 0.50% 1/10W R189 1-216-635-11 s METAL CHIP 220 0.50% 1/10W	R258 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R259 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R260 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R261 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R262 1-216-631-11 s METAL CHIP 150 0.50% 1/10W		
R190 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R193 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R194 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R195 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R196 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	R263 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R264 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R265 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R266 1-216-699-11 s METAL CHIP 10OK 0.50% 1/10W R267 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W		
R197 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R200 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R203 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R204 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R207 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W	R268 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R269 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W R270 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W R271 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W R272 1-216-648-11 s METAL CHIP 750 0.50% 1/10W		
R208 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W R209 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R210 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R211 1-216-631-11 s METAL CHIP 150 0.50% 1/10W R212 1-216-631-11 s METAL CHIP 150 0.50% 1/10W	R273 1-216-645-11 s METAL CHIP 560 0.50% 1/10W R274 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R275 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R276 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R277 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W		
R213 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R214 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R215 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R216 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W R217 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W	R278 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R279 1-216-671-11 s METAL CHIP 6.8K 0.50% 1/10W R280 1-216-639-11 s METAL CHIP 330 0.50% 1/10W R281 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W R282 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W		
R218 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W R219 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R220 1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W R221 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W R222 1-216-686-11 s METAL CHIP 30K 0.50% 1/10W	R285 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R288 1-216-637-11 s METAL CHIP 270 0.50% 1/10W R289 1-216-662-11 s METAL CHIP 3K 0.50% 1/10W R290 1-216-674-11 s METAL CHIP 9.1K 0.50% 1/10W R293 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W		
R223 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R224 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R226 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W R227 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W R228 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W	R294 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R295 1-216-672-11 s METAL CHIP 7.5K 0.50% 1/10W R296 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W R297 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W R298 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W		
R229 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R230 1-216-688-11 s METAL CHIP 36K 0.50% 1/10W R231 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W R232 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W	R299 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R300 1-216-635-11 s METAL CHIP 220 0.50% 1/10W R302 1-216-621-11 s METAL CHIP 56 0.50% 1/10W R303 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W		

(VA-86 BOARD)		(VA-86 BOARD)	
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty
R304 R308 R310 R312 R313	1-216-650-11 s METAL CHIP 910 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W 1-216-635-11 s METAL CHIP 220 0.50% 1/10W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W	R381 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R384 1-216-656-11 s METAL CHIP 1.6K 0.50% 1/10W R388 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W R389 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W R390 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R384 R388 R389
R316 R317 R318 R319 R320	1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-691-11 s METAL CHIP 47K 0.50% 1/10W 1-216-627-11 s METAL CHIP 100 0.50% 1/10W 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W	R394 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R395 - 1-216-681-11 s METAL CHIP 18K 0.50% 1/10W R402 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W R426 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	R395 R402 R403
R323 R326 R327 R330 R331	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-664-11 s METAL CHIP 3.6K 0.50% 1/10W 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W	R427 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R428 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R429 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R430 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R431 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W	R428 R429 R430
R332 R333 R334 R335 R336	1-216-662-11 s METAL CHIP 3K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-631-11 s METAL CHIP 150 0.50% 1/10W 1-216-631-11 s METAL CHIP 150 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R438 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R439 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R441 1-216-619-11 s METAL CHIP 47 0.50% 1/10W R458 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R459 1-216-619-11 s METAL CHIP 47 0.50% 1/10W	R439 R441 R458
R337 R338 R339 R340 R341	1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-689-11 s METAL CHIP 39K 0.50% 1/10W	R462 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R463 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R465 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R467 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R469 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W	R463 R465 R467
R342 R343 R344 R346 R347	1-216-666-11 s METAL CHIP 4.3K 0.50% 1/10W 1-216-657-11 s METAL CHIP 1.8K 0.50% 1/10W 1-216-686-11 s METAL CHIP 30K 0.50% 1/10W 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W 1-216-687-11 s METAL CHIP 33K 0.50% 1/10W	R471 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R473 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R491 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R492 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R493 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W	R473 R491 R492
R348 R349 R350 R351 R352	1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-655-11 s METAL CHIP 1.5K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-677-11 s METAL CHIP 12K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R494 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R495 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R496 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R507 1-216-678-11 s METAL CHIP 13K 0.50% 1/10W R509 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R495 R496 R507
R353 R354 R355 R356 R359	1-216-688-11 s METAL CHIP 36K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W 1-216-635-11 s METAL CHIP 22O 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W	R510 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R511 1-216-696-11 s METAL CHIP 75K 0.50% 1/10W R512 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R513 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R514 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W	R511 R512 R513
R360 R361 R362 R363 R364	1-216-631-11 s METAL CHIP 150 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W 1-216-631-11 s METAL CHIP 150 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W	R515 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R516 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R517 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R540 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R541 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W	R516 R517 R540
R365 R366 R367 R368 R369	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-661-11 s METAL CHIP 2.7K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	R543 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R544 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W R546 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R547 1-216-658-11 s METAL CHIP 2K 0.50% 1/10W R550 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	K547
R370 R371 R372 R373 R375	1-216-675-11 s METAL CHIP 10K 0.50% 1/10W 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W 1-247-903-00 s CARBON 1M 5% 1/4W 1-216-641-11 s METAL CHIP 390 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W	R553 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R554 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R556 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R557 1-216-659-11 s METAL CHIP 2.2K 0.50% 1/10W R567 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W	R553 R554 R556 R557 R567
R376 R377 R378 R380	1-216-685-11 s METAL CHIP 27K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-683-11 s METAL CHIP 22K 0.50% 1/10W 1-216-667-11 s METAL CHIP 4.7K 0.50% 1/10W	R568 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R569 1-216-679-11 s METAL CHIP 15K 0.50% 1/10W R587 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R588 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W	R568 R569 R587 R588

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Ref. No. or Q'ty	Part No. SP Description
R589 R590 R591 R592 R596	1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W 1-216-665-11 s METAL CHIP 3.9K 0.50% 1/10W 1-216-685-11 s METAL CHIP 27K 0.50% 1/10W
R597 R598 R599 R600 R601	1-216-681-11 s METAL CHIP 18K 0.50% 1/10W 1-216-689-11 s METAL-CHIP 39K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W 1-216-663-11 s METAL CHIP 3.3K 0.50% 1/10W
R605	1-216-128-11 s METAL CHIP 2M 5% 1/10W
R606	1-216-128-11 s METAL CHIP 2M 5% 1/10W
R607	1-216-268-00 s METAL 820K 5% 1/8W
R608	1-216-699-11 s METAL CHIP 100K 0.50% 1/10W
R609	1-216-699-11 s METAL CHIP 100K 0.50% 1/10W
R610 R615 R616 R617 R627	1-216-699-11 s METAL CHIP 100K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-216-669-11 s METAL CHIP 5.6K 0.50% 1/10W 1-215-480-00 s METAL 300K 1% 1/6W
R628	1-215-480-00 s METAL 300K 1% 1/6W
R629	1-215-480-00 s METAL 300K 1% 1/6W
RV1	1-228-456-00 s RES, ADJ, METAL 1K
RV2	1-228-472-00 s RES, ADJ, METAL 2K
RV4	1-228-462-00 s RES, ADJ, METAL 100K
RV5	1-228-462-00 s RES, ADJ, METAL 100K
RV6	1-228-474-00 s RES, ADJ, METAL 10K
RV7	1-228-457-00 s RES, ADJ, METAL 2K
RV8	1-228-462-00 s RES, ADJ, METAL 100K
RV9	1-228-462-00 s RES, ADJ, METAL 100K
RV10	1-228-474-00 s RES, ADJ, METAL 10K
RV11	1-228-457-00 s RES, ADJ, METAL 2K
RV12	1-228-472-00 s RES, ADJ, METAL 2K
RV14	1-228-462-00 s RES, ADJ, METAL 100K
RV15	1-228-462-00 s RES, ADJ, METAL 100K
RV16	1-228-474-00 s RES, ADJ, METAL 10K
RV17	1-228-457-00 s RES, ADJ, METAL 2K
RV18	1-228-459-00 s RES, ADJ, METAL 10K
RV19	1-228-459-00 s RES, ADJ, METAL 10K
RV20	1-228-471-00 s RES, ADJ, METAL 1K
RV21	1-228-477-00 s RES, ADJ, METAL 100K
RV22	1-228-477-00 s RES, ADJ, METAL 100K
RV23	1-228-477-00 s RES, ADJ, METAL 100K
RV24	1-228-463-00 s RES, ADJ, METAL 200K
RV25	1-228-463-00 s RES, ADJ, METAL 200K
RV26	1-228-463-00 s RES, ADJ, METAL 200K
RV28	1-228-459-00 s RES, ADJ, METAL 10K
RV29	1-228-459-00 s RES, ADJ, METAL 10K
RV30	1-228-459-00 s RES, ADJ, METAL 10K
RV31	1-228-460-00 s RES, ADJ, METAL 20K
RV32	1-228-460-00 s RES, ADJ, METAL 20K
RV33	1-228-460-00 s RES, ADJ, METAL 20K
RV34	1-228-459-00 s RES, ADJ, METAL 10K
RV35	1-228-459-00 s RES, ADJ, METAL 10K
RV36	1-228-459-00 s RES, ADJ, METAL 10K
RV37	1-228-462-00 s RES, ADJ, METAL 100K
RV38	1-228-462-00 s RES, ADJ, METAL 100K
RV39	1-228-462-00 s RES, ADJ, METAL 100K

(VA-86 BOARD)							
Ref. No. or Q'ty	Part	No.	SP	Desc	riptio	on	
RV40 RV41 RV42 RV43 RV44	1-228 1-228 1-228	8-462-00 8-462-00 8-462-00 8-459-00 8-459-00) s) s) s	RES, RES, RES, RES, RES,	ADJ,	METAL METAL METAL METAL METAL	100K 100K 10K
	1-228 1-228 1-228	3-459-00 3-460-00 3-460-00 3-460-00 3-472-00) s) s) s	RES, RES, RES,	ADJ, ADJ,	METAL	20K 20K 20K
RV51 RV52 RV54 RV55 RV56	1-228 1-228 1-228	3-457-00 3-461-00 3-461-00 3-457-00 3-461-00) s) s) s	RES, RES, RES, RES, RES,	ADJ, ADJ, ADJ, ADJ, ADJ,	METAL METAL METAL METAL METAL	50K 50K 2K
RV57 RV58 RV59 RV60 RV61	1-228 1-228 1-228	8-460-00 8-460-00 8-460-00 8-461-00 8-461-00) s) s) s	RES,	ADJ, ADJ, ADJ, ADJ, ADJ,	METAL METAL METAL METAL METAL	20K 20K 50K
RV62	1-228	3-461-00) s	RES,	ADJ,	METAL	50K

1-571-975-31 s SWITCH, CHIP

SI

VA-131A BOARD Serial No. 42701 -	(VA-131A BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
1pc A-8271-927-A o MOUNTED CIRCUIT BOARD, VA-131A 4pcs 7-682-902-01 s SCREW +PWH 2. 6X4 2pcs 7-628-254-40 s SCREW +PS 2. 6X12 C100 1-128-297-41 s ELECT 560F 20% 16V	C330
C101 1-128-283-11 s ELECT 100uF 20% 6.3V C104 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C105 1-135-318-11-s TANTALUM, CHIP 33uF 20% 4V C106 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	C336 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C338 1-135-217-21 s TANTALUM, CHIP 15uF 10% 6.3 C339 1-128-297-41 s ELECT 56uF 20% 16V
C107 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V C109 1-128-283-11 s ELECT 100uF 20% 6.3V C111 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C117 1-128-283-11 s ELECT 100uF 20% 6.3V C121 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V	C341 1-135-179-21 s TANTALUM, CHIP 2. 2uF 10% 16V C344 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C345 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C346 1-135-177-21 s TANTALUM, CHIP 1uF 10% 25V C351 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V
C122 1-135-318-11 s TANTALUM. CHIP 33uF 20% 4V C123 1-128-297-41 s ELECT 56uF 20% 16V C124 1-135-210-11 s TANTALUM, CHIP 4.7uF 10% 10V C125 1-135-210-11 s TANTALUM, CHIP 4.7uF 10% 10V C128 1-163-224-11 s CERAMIC, CHIP 7PF 0.25PF 50V	C356
C130	C361 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V C362 1-163-234-11 s CERAMIC, CHIP 20PF 5% 50V C363 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V C364 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V
C136	C367 1-135-318-11 s TANTALUM, CHIP 33uF 20% 4V C500 1-128-297-41 s ELECT 56uF 20% 16V C501 1-128-283-11 s ELECT 100uF 20% 6.3V C504 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V
C144 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C145 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C146 1-135-177-21 s TANTALUM, CHIP 1uF 10% 25V C153 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C156 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	C505
C157 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V C158 1-135-215-21 s TANTALUM, CHIP 6.8uF 20% 16V C159 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V C160 1-135-215-21 s TANTALUM, CHIP 6.8uF 20% 16V C161 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	C521 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C522 1-135-318-11 s TANTALUM, CHIP 33uF 20% 4V C523 1-128-297-41 s ELECT 56uF 20% 16V C524 1-135-210-11 s TANTALUM, CHIP 4 7uF 10% 10V
C162 1-163-234-11 s CERAMIC, CHIP 20PF 5% 50V C163 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V C164 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V C165 1-163-220-11 s CERAMIC, CHIP 3PF 0. 25PF 50V C167 1-135-318-11 s TANTALUM, CHIP 33uF 20% 4V	C525
C300 1-128-297-41 s ELECT 56uF 20% 16V C301 1-128-283-11 s ELECT 100uF 20% 6.3V C304 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C305 1-135-318-11 s TANTALUM, CHIP 33uF 20% 4V C306 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	C535 1-135-318-11 s TANTALUM, CHIP 33uF 20% 4V C536 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C538 1-135-217-21 s TANTALUM, CHIP 15uF 10% 6.3 C539 1-128-297-41 s FLECT 56uF 20% 16V
C307 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V C309 1-128-283-11 s ELECT 100uF 20% 6.3V C311 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V C317 1-128-283-11 s ELECT 100uF 20% 6.3V C321 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V	C540
C322 1-135-318-11 s TANTALUM, CHIP 33uF 20% 4V C323 1-128-297-41 s ELECT 56uF 20% 16V C324 1-135-210-11 s TANTALUM, CHIP 4. 7uF 10% 10V C325 1-135-210-11 s TANTALUM, CHIP 4. 7uF 10% 10V C328 1-163-224-11 s CERAMIC, CHIP 7PF 0. 25PF 50V	C554
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(VA-131A	BOARD)	(VA-131A	BOARD)
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description
C562 C563	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V 1-163-234-11 s CERAMIC, CHIP 20PF 5% 50V	FL500	1-239-644-11 s FILTER, TRAP
C564	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	IC100	8-759-067-37 s IC TLC277CPS
C565	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	IC103	8-759-242-64 s IC TC4W53F
C566	1-163-220-11 s CERAMIC, CHIP 3PF 0.25PF 50V	IC104	8-759-030-55 s IC MC1496M
C567	1-135-318-11 s TANTALUM, CHIP 33uF 20% 4V	IC105	8-759-906-53 s IC TCAW53F
C701	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	IC106	8-759-242-64 s IC TCAW53F
C702 C703	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V 1-135-215-21 s TANTALUM, CHIP 6.8uF 20% 16V 1-135-070-00 s TANTALUM, CHIP 0.1uF 10% 35V	IC107 IC108 IC300	8-759-030-55 s IC MC1496M 8-759-242-64 s IC TC4W53F 8-759-067-37 s IC TLC277CPS
C704	1-135-070-00 s TANTALUM, CHIP 0.1uF 10% 35V	IC303	8-759-242-64 s IC TCAW53F
C705		IC304	8-759-030-55 s IC MC1496M
C706 C707 C708	1-135-177-21 s TANTALUM, CHIP 1uF 10% 25V 1-135-070-00 s TANTALUM, CHIP 0.1uF 10% 35V 1-135-070-00 s TANTALUM, CHIP 0.1uF 10% 35V	1C305 1C306	8-759-906-53 s IC TL062CPS 8-759-242-64 s IC TC4W53F
Č709 C710	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	IC307 IC500 IC504	8-759-030-55 s IC MC1496M 8-759-067-37 s IC TLC277CPS 8-759-242-64 s IC TC4W53F
C711	1-135-070-00 s TANTALUM, CHIP 0.1uF 10% 35V	IC505	8-759-030-55 s IC MC1496M
C712	1-135-070-00 s TANTALUM CHIP 0.1uF 10% 35V	IC506	8-759-906-53 s IC TL062CPS
Č713	1-135-070-00 s TANTALUM, CHIP 0.1 LIF 10% 35V	1C507	8-759-242-64 s IC TC4W53F
C714	1-135-215-21 s TANTALUM, CHIP 6.8 LF 20% 16V	1C508	8-759-030-55 s IC MC1496M
C716 C717 C719	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V 1-163-275-11 s CERAMIC, CHIP 0.001uF 5% 50V 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	IC509 IC511	8-759-234-77 s IC TC4S66F 8-759-204-51 s IC TC40H008F
Č721 C725	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V 1-135-215-21 s TANTALUM, CHIP 6.8uF 20% 16V	IČŠ12 IC701 IC702	8-759-209-57 s ič řčáš69F 8-759-906-54 s ič řídáš69F 8-759-008-74 s ič mc14001BF
C726	1-163-275-11 s CERAMIC, CHIP 0.001uF 5% 50V	1č703	8-759-209-97 s IC TC4S81F
C727	1-163-263-11 s CERAMIC, CHIP 330PF 5% 50V	1c704	8-759-009-19 s IC MC14081BF
Č728 C729 C730	1-135-177-21 s TANTALUM, CHIP luF 10% 25V 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V 1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	IC705 IC706	8-759-008-74 s IC MC14001BF 8-759-009-04 s IC MC14050BF
C731	1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V	ĬČ707	8-759-147-84 s IC CXD8072Q
C733	1-135-177-21 s TANTALUM, CHIP 1uF 10% 25V	IC708	8-759-009-12 s IC MC14071BF
C734	1-135-177-21 s TANTALUM, CHIP 1UF 10% 25V	1C709	8-759-209-97 s IC TC4S81F
C735	1-135-177-21 s TANTALUM, CHIP 1UF 10% 25V	1C710	8-759-008-74 s IC MC14001BF
C736	1-137-298-11 s FILM 0.022uF 5% 16V	1C711	8-759-209-57 s IC TC4S69F
C738	1-137-298-11 s FILM 0. 022uF 5% 16V	10712	8-759-635-27 s IC M62352GP
C739	1-137-298-11 s FILM 0. 022uF 5% 16V	10713	8-759-209-57 s IC TC4S69F
C740	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	IC714	8-759-906-54 s IC TL064CNS
C741	1-135-216-11 s TANTALUM, CHIP 10uF 20% 10V	IC715	8-759-013-96 s IC MC74HC4316F
Č742 C743	Î-Î37-306-ÎÎ s FILM 0.1uF 5% 16V 1-137-302-11 s FILM 0.047uF 5% 16V	IC716 IC717 IC718	8-759-906-54 s IC TL064CNS 8-759-906-54 s IC TL064CNS 8-759-906-54 s IC TL064CNS
C745 C747 C748	1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V 1-137-298-11 s FILM 0.022uF 5% 16V 1-135-259-11 s TANTALUM, CHIP 10uF 20% 6.3V	IC719 IC720	8-759-906-54 s IC TL064CNS 8-759-300-71 s IC MC14053BF
Č749 CN1	1-135-259-11 s TANTALUM, CHIP TOUF 20% 6.3V 1-562-730-11 o CONNECTOR, MULTI 90P, MALE	ič721 1C722 IC723	8-759-300-71 s IC MC14053BF 8-759-300-71 s IC MC14053BF 8-759-928-08 s IC TLC27M4CNS
D101	8-719-104-34 s DIODE 1S2836	L100	1-412-026-11 s INDUCTOR, CHIP luH
D301	8-719-104-34 s D10DE 1S2836	L101	1-412-026-11 s INDUCTOR, CHIP luh
D501	8-719-104-34 s D10DE 1S2836	L102	1-412-026-11 s INDUCTOR, CHIP luh
D502	8-719-800-76 s D10DE 1SS226	L300	1-412-026-11 s INDUCTOR, CHIP luh
D701	8-719-159-85 s DIODE RD2. OMB	L301	1-412-026-11 s INDUCTOR, CHIP 1uH
D702	8-719-157-36 s DIODE RD6. 8M-B	L302	1-412-026-11 s INDUCTOR, CHIP 1uH
D703	8-719-118-38 s DIODE ISZ46A	L500	1-412-026-11 s INDUCTOR, CHIP 10H
D704	8-719-157-36 s DIODE RD6.8M-B	L501	1-412-026-11 s INDUCTOR, CHIP 10H
D705	8-719-104-34 s DIODE ISZ836	L502	1-412-026-11 s INDUCTOR, CHIP 10H
D706	8-719-400-18 s DIODE MA152WK	L701	1-412-029-11 s INDUCTOR, CHIP 10uH
FL100	1-239-644-11 s FILTER, TRAP	L702	1-412-029-11 s INDUCTOR, CHIP 10uH
FL300	1-239-644-11 s FILTER, TRAP	L703	1-412-029-11 s INDUCTOR, CHIP 10uH

(VA-131A BO	ARD)	(VA-131A	BOARD)
Ref. No. or Q'ty Par		Ref. No. or Q'ty	Part No. SP Description
L705 1-4 L706 1-4 L707 1-4	412-026-11 s INDUCTOR, CHIP luH 412-026-11 s INDUCTOR, CHIP luH	0330 0331 0332 0333 0334	8-765-930-11 s TRANSISTOR 3SK163-3 8-765-930-11 s TRANSISTOR 3SK163-3 8-765-930-11 s TRANSISTOR 3SK163-3 8-765-930-11 s TRANSISTOR 3SK163-3 8-729-403-29 s TRANSISTOR XN6435
L709 1- L710 1-	412-026-11 s INDUCTOR, CHIP luH 412-026-11 s INDUCTOR, CHIP luH	Q501 Q502 Q503	8-729-403-32 s TRANSISTOR XN6534 8-729-120-28 s TRANSISTOR 28C1623-1.51.6 8-729-403-29 s TRANSISTOR XN6435 8-729-216-22 s TRANSISTOR 28A1162
Ω103 8-	729-403-32 s TRANSISTOR XN6534 729-120-28 s TRANSISTOR 2SC1623-L5L6 729-403-29 s TRANSISTOR XN6435	Q504 Q505	8-729-403-32 s TRANSISTOR XN65.34
Q104 8- Q105 8-	729-216-22 s TRANSISTOR 2SA1162 729-403-32 s TRANSISTOR XN6534	Q506 Q508 Q509	8-729-109-44 s TRANSISTOR 2SK94 8-729-402-19 s TRANSISTOR XN6501 8-729-403-32 s TRANSISTOR XN6534 8-729-403-29 s TRANSISTOR XN6435 8-729-216-22 s TRANSISTOR 2SA1162
Q108 8-	729-109-44 s TRANSISTOR ZSK94 729-402-19 s TRANSISTOR XN6501 729-403-32 s TRANSISTOR XN6534	Q510 Q511	
•		Q513 Q514 Q515 Q517	8-729-216-22 s TRANSISTOR 2SA1162 8-729-109-44 s TRANSISTOR 2SK94 8-729-403-32 s TRANSISTOR XN6534 8-730-403-30 s TRANSISTOR VN6435
0114 8- 0115 8-	-729-216-22 s TRANSISTOR 2SA1162 -729-109-44 s TRANSISTOR 2SK94 -729-403-32 s TRANSISTOR XN6534	Q518	8-729-403-29 s TRANSISTOR XN6435 8-729-216-22 s TRANSISTOR 2SA1162
	-729-403-29 s TRANSISTOR XN6435 -729-216-22 s TRANSISTOR 2SA1162	Q520 Q521 Q522 Q525 Q526	8-729-216-22 s TRANSISTOR 2SA1162 8-729-109-44 s TRANSISTOR 2SK94 8-729-403-29 s TRANSISTOR XN6435 8-729-200-86 s TRANSISTOR 2SC2714-0
0121 8-	-77U_AB3C=7U & 3RANSISIBR XN5A3S		8-729-216-22 s TRANSISTOR 2SA1162
Q126 8-	729-200-86 s TRANSISTOR 2SC2714-0 -729-216-22 s TRANSISTOR 2SA1162	Q527 Q528 Q529 Q530	8-729-403-32 s TRANSISTOR XN6534 8-765-930-11 s TRANSISTOR 3SK163-3 8-765-930-11 s TRANSISTOR 3SK163-3 8-765-930-11 s TRANSISTOR 3SK163-3
0127 8- 0128 8- 0129 8-	-765-930-11 s TRANSISION 35N153-3 -765-930-11 s TRANSISTOR 35N163-3	Q531	8-765-930-11 s TRANSISTOR 3SK163-3 8-765-930-11 s TRANSISTOR 3SK163-3
	-765-930-11 s TRANSISTOR 35K163-3 -765-930-11 s TRANSISTOR 35K163-3	Q532 Q533 Q536 Q537	8-765-930-11 s TRANSISTOR 3SK163-3 8-765-930-11 s TRANSISTOR 3SK163-3 8-729-901-01 s TRANSISTOR DTC144EK
0132 8- 0133 8- 0217 8-	-765-930-11 s TKANSISTOK 35K163-3 -729-A03-32 s TRANSISTOR XN6534	Q/01	8-729-403-29 s TRANSISTOR XN6435 8-729-101-07 s TRANSISTOR 2SB798
		Q702 Q703 Q704	8-729-807-50 s TRANSISTOR 2SD1623 8-729-101-07 s TRANSISTOR 2SB798 8-729-216-22 s TRANSISTOR 2SA1162 8-729-120-28 s TRANSISTOR 2SC1623-L5L6
0304 8- 0305 8-	-729-403-29 s TRANSISTOR XN6435 -729-216-22 s TRANSISTOR 2SA1162 -729-403-32 s TRANSISTOR XN6534	0705 0706	8-729-216-22 s TKANSISIUK ZSAII62
Q308 8-	-729-109-44 s TRANSISTOR 2SK94 -729-402-19 s TRANSISTOR XN6501	0707 0708 0709	8-729-120-28 s TRANSISTOR 2SC1623-L5L6 8-729-216-22 s TRANSISTOR 2SA1162 8-729-216-22 s TRANSISTOR 2SA1162
0309 8- 0310 8- 0311 8-	-729-403-32 s TRANSISTOR XN6534 -729-403-29 s TRANSISTOR XN6435 -729-216-22 s TRANSISTOR 2SA1162 -729-216-22 s TRANSISTOR 2SA1162	Q710 Q711	8-729-120-28 s TRANSISTOR 2SC1623-L5L6 8-729-120-28 s TRANSISTOR 2SC1623-L5L6
Q314 8-	-729-109-44 s 1KAN51510K 25K94	Q712 Q713 Q714	8-729-120-28 s TRANSISTOR 2SC1623-L5L6 8-729-901-06 s TRANSISTOR DTA144EK 8-729-901-06 s TRANSISTOR DTA144EK
0317 8- 0318 8-	-729-403-32 s TRANSISTOR XN6534 -729-403-29 s TRANSISTOR XN6435 -729-216-22 s TRANSISTOR 2SA1162 -729-216-22 s TRANSISTOR 2SA1162	Q715 Q716	8-729-901-06 s TRANSISTOR DTA144EK 8-729-901-06 s TRANSISTOR DTA144EK
Q321 8-	-729-109-44 s 1KANSISIUK 25K94	0717 0718 0719	8-729-120-28 s TRANSISTOR 2SC1623-L5L6 8-729-421-71 s TRANSISTOR 2SK620 8-729-120-28 s TRANSISTOR 2SC1623-L5L6 8-729-421-71 s TRANSISTOR 2SK620
0325 8-	-729-403-29 s TRANSISTOR XN6435 -729-200-86 s TRANSISTOR 2SC2714-0 -729-216-22 s TRANSISTOR 2SA1162 -729-403-32 s TRANSISTOR XM6534	Q720 Q721	8-729-120-28 s TRANSISTOR 2SC1623-L5L6
Q328 8-	-/65-930-11 s 1KAN5151UK 35K163-3	Q722 R28	8-729-421-71 s TRANSISTOR 2SK620 1-216-673-11 s METAL, CHIP 8,2K 0.5% 1/10W
Q329 8-	-765-930-11 s TRANSISTOR 3SK163-3	R100	1-216-627-11 s METAL, CHIP 100 0.5% 1/10W

(VA-131A BOARD)	(VA-131A BOARD)
Ref. No. or Q ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R101 1-216-682-11 s METAL, CHIP 20K 0.5% 1/10W R102 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W R103 1-216-603-11 s METAL, CHIP 10 0.5% 1/10W R104 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R105 1-216-641-11 s METAL, CHIP 390 0.5% 1/10W	R171
R106 1-216-641-11 s METAL. CHIP 390 0.5% 1/10W R107 1-216-651-11 s METAL. CHIP 1K 0.5% 1/10W R108 1-216-656-11 s METAL. CHIP 1.6K 0.5% 1/10W R110 1-216-679-11 s METAL. CHIP 1.6K 0.5% 1/10W R111 1-216-645-11 s METAL. CHIP 560 0.5% 1/10W	R176
R112 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W R113 1-216-644-11 s METAL, CHIP 510 0.5% 1/10W R114 1-216-657-11 s METAL, CHIP 1.8K 0.5% 1/10W R115 1-216-660-11 s METAL, CHIP 2.4K 0.5% 1/10W R116 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W	R182
R117 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R118 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W R120 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W R121 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R122 1-216-611-11 s METAL, CHIP 22 0.5% 1/10W	R187
R123 1-216-635-11 s METAL, CHIP 220 0.5% 1/10W R124 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R125 1-216-653-11 s METAL, CHIP 1.2K 0.5% 1/10W R126 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W R127 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W	R193 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W R194 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R195 1-216-658-11 s METAL, CHIP 2K 0.5% 1/10W R196 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R197 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W
R128 1-216-659-11 s METAL, CHIP 2.2K 0.5% 1/10W R129 1-216-635-11 s METAL, CHIP 220 0.5% 1/10W R130 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R131 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R135 1-216-668-11 s METAL, CHIP 5.1K 0.5% 1/10W	R198
R136 1-216-658-11 s METAL, CHIP 2K 0.5% 1/10W R137 1-216-652-11 s METAL, CHIP 1.1K 0.5% 1/10W R140 1-216-640-11 s METAL, CHIP 360 0.5% 1/10W R141 1-216-646-11 s METAL, CHIP 620 0.5% 1/10W R143 1-216-683-11 s METAL, CHIP 620 0.5% 1/10W	R203 1-218-768-11 s METAL, CHIP 470K 0.50% 1/10W R204 1-216-659-11 s METAL, CHIP 2.2K 0.5% 1/10W R205 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R206 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R207 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W
R144 1-216-668-11 s METAL. CHIP 5.1K 0.5% 1/10W R145 1-216-672-11 s METAL. CHIP 7.5K 0.5% 1/10W R146 1-216-664-11 s METAL. CHIP 3.6K 0.5% 1/10W R147 1-216-663-11 s METAL. CHIP 3.3K 0.5% 1/10W R148 1-216-669-11 s METAL. CHIP 5.6K 0.5% 1/10W	R208 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R209 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W R210 1-216-611-11 s METAL, CHIP 22 0.5% 1/10W R211 1-218-764-11 s METAL, CHIP 330K 0.50% 1/10W R212 1-216-667-11 s METAL, CHIP 4.7K 0.5% 1/10W
R149 1-216-676-11 s METAL. CHIP 11K 0.5% 1/10W R150 1-216-663-11 s METAL. CHIP 3.3K 0.5% 1/10W R151 1-216-663-11 s METAL. CHIP 3.3K 0.5% 1/10W R152 1-216-627-11 s METAL. CHIP 100 0.5% 1/10W R153 1-218-768-11 s METAL. CHIP 470K 0.50% 1/10W	R213 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W R214 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W R215 1-216-643-11 s METAL, CHIP 470 0.5% 1/10W R216 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R217 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W
R155 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R156 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R158 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W R159 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W R161 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W	R218 1-216-655-11 s METAL, CHIP 1.5K 0.5% 1/10W R219 1-216-644-11 s METAL, CHIP 510 0.5% 1/10W R220 1-216-662-11 s METAL, CHIP 3K 0.5% 1/10W R221 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W R222 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W
R162 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W R163 1-216-659-11 s METAL, CHIP 2.2K 0.5% 1/10W R164 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W R165 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W R166 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W	R223 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W R225 1-216-634-11 s METAL, CHIP 200 0.5% 1/10W R226 1-216-631-11 s METAL, CHIP 150 0.5% 1/10W R227 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R228 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W
R167 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R168 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W R169 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W R170 1-216-634-11 s METAL, CHIP 200 0.5% 1/10W	R229 1-218-757-11 s METAL, CHIP 160K 0.50% 1/10W R235 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R236 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R237 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W

(VA-131A BOARD)	(VA-131A BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R239 1-216-687-11 s METAL. CHIP 33K 0.5% 1/10W R240 1-216-687-11 s METAL. CHIP 33K 0.5% 1/10W R241 1-216-687-11 s METAL. CHIP 33K 0.5% 1/10W R300 1-216-627-11 s METAL. CHIP 33K 0.5% 1/10W R301 1-216-682-11 s METAL. CHIP 100 0.5% 1/10W	R367 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R368 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W R369 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W R370 1-216-634-11 s METAL, CHIP 200 0.5% 1/10W R371 1-218-766-11 s METAL, CHIP 390K 0.50% 1/10W
R302 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W R303 1-216-603-11 s METAL, CHIP 10 0.5% 1/10W R304 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R305 1-216-641-11 s METAL, CHIP 390 0.5% 1/10W R306 1-216-641-11 s METAL, CHIP 390 0.5% 1/10W	R372 1-216-634-11 s METAL, CHIP 200 0.5% 1/10W R373 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W R374 1-216-670-11 s METAL, CHIP 6.2K 0.5% 1/10W R375 1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W R376 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W
R307 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R308 1-216-656-11 s METAL, CHIP 1.6K 0.5% 1/10W R310 1-216-680-11 s METAL, CHIP 16K 0.5% 1/10W R311 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W R312 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W	R377 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W R378 1-216-644-11 s METAL, CHIP 510 0.5% 1/10W R379 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W R380 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W R382 1-216-670-11 s METAL, CHIP 6.2K 0.5% 1/10W
R313 1-216-644-11 s METAL, CHIP 510 0.5% 1/10W R314 1-216-657-11 s METAL, CHIP 1.8K 0.5% 1/10W R315 1-216-660-11 s METAL, CHIP 2.4K 0.5% 1/10W R316 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R317 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W	R383 1-216-643-11 s METAL. CHIP 470 0.5% 1/10W R384 1-216-665-11 s METAL. CHIP 3.9K 0.5% 1/10W R385 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R386 1-216-635-11 s METAL, CHIP 220 0.5% 1/10W R387 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W
R318 1-216-669-11 s METAL. CHIP 5.6K 0.5% 1/10W R320 1-216-673-11 s METAL. CHIP 8.2K 0.5% 1/10W R321 1-216-675-11 s METAL. CHIP 10K 0.5% 1/10W R322 1-216-611-11 s METAL. CHIP 22 0.5% 1/10W R323 1-216-635-11 s METAL. CHIP 220 0.5% 1/10W	R389 1-216-635-11 s METAL, CHIP 220 0.5% 1/10W R390 1-216-659-11 s METAL, CHIP 2.2K 0.5% 1/10W R391 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W R392 1-216-631-11 s METAL, CHIP 150 0.5% 1/10W R393 1-216-669-11 s METAL, CHIP 15.6K 0.5% 1/10W
R324 1-216-675-11 s METAL. CHIP 10K 0.5% 1/10W R325 1-216-653-11 s METAL. CHIP 1.2K 0.5% 1/10W R326 1-216-661-11 s METAL. CHIP 2.7K 0.5% 1/10W R327 1-216-661-11 s METAL. CHIP 2.7K 0.5% 1/10W R328 1-216-659-11 s METAL. CHIP 2.2K 0.5% 1/10W	R394 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R395 1-216-658-11 s METAL, CHIP 2K 0.5% 1/10W R396 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R397 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W R398 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W
R329 1-216-635-11 s METAL. CHIP 220 0.5% 1/10W R330 1-216-675-11 s METAL. CHIP 10K 0.5% 1/10W R331 1-216-675-11 s METAL. CHIP 10K 0.5% 1/10W R335 1-216-668-11 s METAL. CHIP 5.1K 0.5% 1/10W R336 1-216-658-11 s METAL. CHIP 2K 0.5% 1/10W	R399 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W R400 1-216-664-11 s METAL, CHIP 3.6K 0.5% 1/10W R401 1-216-634-11 s METAL, CHIP 200 0.5% 1/10W R402 1-216-634-11 s METAL, CHIP 200 0.5% 1/10W R403 1-218-768-11 s METAL, CHIP 470K 0.50% 1/10W
R337 1-216-652-11 s METAL. CHIP 1.1K 0.5% 1/10W R340 1-216-640-11 s METAL. CHIP 360 0.5% 1/10W R341 1-216-646-11 s METAL. CHIP 620 0.5% 1/10W R343 1-216-683-11 s METAL. CHIP 22K 0.5% 1/10W R344 1-216-668-11 s METAL. CHIP 5.1K 0.5% 1/10W	R404 1-216-659-11 s METAL, CHIP 2.2K 0.5% 1/10W R405 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R406 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R407 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R408 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W
R345 1-216-672-11 s METAL. CHIP 7.5K 0.5% 1/10W R346 1-216-664-11 s METAL. CHIP 3.6K 0.5% 1/10W R347 1-216-663-11 s METAL. CHIP 3.3K 0.5% 1/10W R348 1-216-669-11 s METAL. CHIP 5.6K 0.5% 1/10W R349 1-216-676-11 s METAL. CHIP 11K 0.5% 1/10W	R409 1-216-611-11 s METAL, CHIP 22 0.5% 1/10W R410 1-218-764-11 s METAL, CHIP 330K 0.50% 1/10W R411 1-216-667-11 s METAL, CHIP 4.7K 0.5% 1/10W R412 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W R413 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W
R350 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W R351 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W R352 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R353 1-218-768-11 s METAL, CHIP 470K 0.50% 1/10W R355 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W	R414 1-216-631-11 s METAL, CHIP 150 0.5% 1/10W R415 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R416 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W R417 1-218-757-11 s METAL, CHIP 160K 0.50% 1/10W R418 1-216-655-11 s METAL, CHIP 1.5K 0.5% 1/10W
R356 1-216-651-11 s METAL. CHIP 1K 0.5% 1/10W R358 1-216-661-11 s METAL. CHIP 2.7K 0.5% 1/10W R359 1-216-679-11 s METAL. CHIP 15K 0.5% 1/10W R361 1-216-683-11 s METAL. CHIP 22K 0.5% 1/10W R362 1-216-645-11 s METAL. CHIP 560 0.5% 1/10W	R419 1-216-644-11 s METAL. CHIP 510 0.5% 1/10W R420 1-216-662-11 s METAL, CHIP 3K 0.5% 1/10W R421 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W R422 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R425 1-216-634-11 s METAL, CHIP 200 0.5% 1/10W
R363 1-216-659-11 s METAL. CHIP 2.2K 0.5% 1/10W R364 1-216-661-11 s METAL. CHIP 2.7K 0.5% 1/10W R365 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W R366 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W	R435 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R436 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R437 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R439 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W

(VA-131A B	OARD)	(VA-131A BOARD)	
Ref. No. or Q'ty P	Part No. SP Description	Ref. No. or Q'ty Part No. SP Description	
R441 1 R500 1	1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W 1-216-682-11 s METAL, CHIP 20K 0.5% 1/10W 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W	R570	0W 10W 10W
R504 -1 R505 1 R506 1	1-216-603-11 s METAL. CHIP 10 0.5% 1/10W 1-216-627-11 s METALCHIP 100 0.5% 1/10W 1-216-641-11 s METAL, CHIP 390 0.5% 1/10W 1-216-641-11 s METAL, CHIP 390 0.5% 1/10W 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W	R575	OW '10W '10W
R510 R511 R512	1-216-656-11 s METAL. CHIP 1.6K 0.5% 1/10W 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W 1-216-644-11 s METAL, CHIP 5.0K 0.5% 1/10W	R580 1-216-683-11 s METAL, CHIP 22K 0.5% 1/18581 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/18582 1-216-644-11 s METAL, CHIP 510 0.5% 1/18583 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/18584 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/18584	OW 10W
R515 R516 R517	1-216-657-11 s METAL. CHIP 1.8K 0.5% 1/10W 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W 1-216-651-11 s METAL. CHIP 1K 0.5% 1/10W 1-216-660-11 s METAL. CHIP 2.4K 0.5% 1/10W 1-216-675-11 s METAL. CHIP 10K 0.5% 1/10W	R586 1-216-670-11 s METAL, CHIP 6.2K 0.5% 1/1 R587 1-216-643-11 s METAL, CHIP 470 0.5% 1/1 R588 1-216-665-11 s METAL, CHIP 3.9K 0.5% 1/1 R589 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10 R590 1-216-635-11 s METAL, CHIP 220 0.5% 1/1)W '10w
R520 R522 R523	1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W 1-216-611-11 s METAL, CHIP 22 0.5% 1/10W	R591 1-216-687-11 s METAL, CHIP 33K 0.5% 1/1 R593 1-216-635-11 s METAL, CHIP 220 0.5% 1/1 R594 1-216-659-11 s METAL, CHIP 2.2K 0.5% 1/1 R595 1-216-645-11 s METAL, CHIP 560 0.5% 1/1 R596 1-216-631-11 s METAL, CHIP 150 0.5% 1/1	:0W /10W :0W
R527 R528 R529 R530 R531	1-216-635-11 s METAL. CHIP 220 0.5% 1/10W 1-216-675-11 s METAL. CHIP 10K 0.5% 1/10W 1-216-653-11 s METAL. CHIP 1.2K 0.5% 1/10W 1-216-661-11 s METAL. CHIP 2.7K 0.5% 1/10W 1-216-661-11 s METAL. CHIP 2.7K 0.5% 1/10W	R597 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/R598 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10 R599 1-216-658-11 s METAL, CHIP 2K 0.5% 1/10 R600 1-216-699-11 s METAL, CHIP 100K 0.5% 1/R601 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/)W)W /10W
R534 R535	1-216-659-11 s METAL. CHIP 2.2K 0.5% 1/10W 1-216-635-11 s METAL. CHIP 220 0.5% 1/10W 1-216-675-11 s METAL. CHIP 10K 0.5% 1/10W 1-216-675-11 s METAL. CHIP 10K 0.5% 1/10W 1-216-668-11 s METAL. CHIP 5.1K 0.5% 1/10W	R602 1-216-627-11 s METAL, CHIP 100 0.5% 1/1 R603 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/1 R604 1-216-664-11 s METAL, CHIP 3.6K 0.5% 1/1 R605 1-216-634-11 s METAL, CHIP 200 0.5% 1/1 R606 1-216-634-11 s METAL, CHIP 200 0.5% 1/1	/10W /10W 10W
R544	1-216-658-11 s METAL, CHIP 2K 0.5% 1/10W 1-216-652-11 s METAL, CHIP 1.1K 0.5% 1/10W 1-216-640-11 s METAL, CHIP 360 0.5% 1/10W 1-216-646-11 s METAL, CHIP 620 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W	R607 1-218-768-11 s METAL, CHIP 470K 0.50% 1 R608 1-216-659-11 s METAL, CHIP 2.2K 0.5% 1/ R609 1-216-675-11 s METAL, CHIP 10K 0.5% 1/1 R610 1-216-675-11 s METAL, CHIP 10K 0.5% 1/1 R611 1-216-675-11 s METAL, CHIP 10K 0.5% 1/1	/10W IOW IOW
R550 R551	1-216-668-11 s METAL, CHIP 5.1K 0.5% 1/10W 1-216-672-11 s METAL, CHIP 7.5K 0.5% 1/10W 1-216-664-11 s METAL, CHIP 3.6K 0.5% 1/10W 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W	R613 1-216-651-11 s METAL, CHIP 1K 0. 5% 1/10 R614 1-216-651-11 s METAL, CHIP 1K 0. 5% 1/10 R616 1-216-699-11 s METAL, CHIP 100K 0. 5% 1/ R617 1-216-699-11 s METAL, CHIP 100K 0. 5% 1/ R618 1-216-651-11 s METAL, CHIP 1K 0. 5% 1/10)W /10W /10W
R556	1-216-676-11 s METAL, CHIP 11K 0.5% 1/10W 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W 1-218-768-11 s METAL, CHIP 470K 0.50% 1/10W	R619 1-216-651-11 s MÉTAL, CHIP IK 0. 5% 1/10 R620 1-216-611-11 s METAL, CHIP 22 0. 5% 1/10 R621 1-216-675-11 s METAL, CHIP 10K 0. 5% 1/1 R622 1-216-649-11 s METAL, CHIP 820 0. 5% 1/1 R623 1-216-699-11 s METAL, CHIP 100K 0. 5% 1/1)W LOW LOW
R560 R562 R563	1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W	R624 1-216-627-11 s METAL, CHIP 100 0.5% 1/1 R625 1-218-764-11 s METAL, CHIP 330K 0.50% 1 R626 1-216-667-11 s METAL, CHIP 4.7K 0.5% 1/ R627 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/ R628 1-216-655-11 s METAL, CHIP 1.5K 0.5% 1/	1/10W /10W
R566 R567 R568 R569	1-216-645-11 s METAL, CHIP 560 0.5% 1/10W 1-216-659-11 s METAL, CHIP 2.2K 0.5% 1/10W 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W	R629 1-216-644-11 s METAL, CHIP 510 0.5% 1/1 R630 1-216-662-11 s METAL, CHIP 3K 0.5% 1/10 R631 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/1 R632 1-216-675-11 s METAL, CHIP 10K 0.5% 1/1)W /10W

(VA-131A BOARD)	(VA-131A BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R634 1-216-634-11 s METAL, CHIP 200 0.5% 1/10W R635 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R636 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R637 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R639 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W	R749
R640 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R641 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R642 1-216-631-11 s METAL, CHIP 150 0.5% 1/10W R643 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R644 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W	R754 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R755 1-216-651-11 s METAL, CHIP 1K 0:5% 1/10W R756 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R757 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R758 1-218-756-11 s METAL, CHIP 150K 0.50% 1/10W
R648 1-218-757-11 s METAL, CHIP 160K 0.50% 1/10W R701 1-216-685-11 s METAL, CHIP 27K 0.5% 1/10W R702 1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W R703 1-216-662-11 s METAL, CHIP 3K 0.5% 1/10W R704 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W	R759 1-216-689-11 s METAL, CHIP 39K 0.5% 1/10W R760 1-218-768-11 s METAL, CHIP 470K 0.50% 1/10W R761 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R762 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R763 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W
R705 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W R706 1-216-655-11 s METAL, CHIP 1.5K 0.5% 1/10W R707 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W R708 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R709 1-216-677-11 s METAL, CHIP 12K 0.5% 1/10W	R764 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R765 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R766 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R767 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W R768 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W
R710 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W R711 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R712 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R713 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R714 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W	R769 1-218-757-11 s METAL, CHIP 160K 0.50% 1/10W R770 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R771 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R772 1-216-689-11 s METAL, CHIP 39K 0.5% 1/10W R773 1-216-673-11 s METAL, CHIP 8.2K 0.5% 1/10W
R715 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R716 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R717 1-216-651-11 s METAL, CHIP 1K 0.5% 1/10W R718 1-216-699-11 s METAL, CHIP 1K 0.5% 1/10W R719 1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W	R774
R720 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W R721 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W R722 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W R723 1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W R724 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W	R779
R725 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R726 1-216-681-11 s METAL, CHIP 18K 0.5% 1/10W R727 1-216-689-11 s METAL, CHIP 39K 0.5% 1/10W R728 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W R729 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W	R784 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R785 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R786 1-216-689-11 s METAL, CHIP 39K 0.5% 1/10W R787 1-218-768-11 s METAL, CHIP 470K 0.50% 1/10W R788 1-218-759-11 s METAL, CHIP 200K 0.50% 1/10W
R730 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R731 1-216-693-11 s METAL, CHIP 56K 0.5% 1/10W R732 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W R733 1-216-671-11 s METAL, CHIP 2.7K 0.5% 1/10W R734 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W	R789 1-216-689-11 s METAL, CHIP 39K 0.5% 1/10W R790 1-218-768-11 s METAL, CHIP 470K 0.50% 1/10W R791 1-216-689-11 s METAL, CHIP 39K 0.5% 1/10W R792 1-218-768-11 s METAL, CHIP 470K 0.50% 1/10W R793 1-216-689-11 s METAL, CHIP 39K 0.5% 1/10W
R735 1-216-665-11 s METAL, CHIP 3.9K 0.5% 1/10W R736 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W R737 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R738 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R739 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W	R794
R740 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W R741 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R742 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R743 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R744 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W	R799
R745 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R746 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R747 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W R748 1-216-627-11 s METAL, CHIP 100 0.5% 1/10W	R804 1-216-678-11 s METAL, CHIP 13K 0.5% 1/10W R805 1-218-766-11 s METAL, CHIP 390K 0.50% 1/10W R806 1-216-696-11 s METAL, CHIP 75K 0.5% 1/10W R807 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W

(VA-131A BOARD)	(VA-131A BOARD)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
R808 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R809 1-216-675-11 s METAL, CHIP 10K 0.5% 1/10W R810 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R811 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R812 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W	RV503 1-228-462-00 s RES, ADJ, METAL 100K RV504 1-228-461-00 s RES, ADJ, METAL 50K RV505 1-228-476-00 s RES, ADJ, METAL 50K RV506 1-228-462-00 s RES, ADJ, METAL 100K RV701 1-228-456-00 s RES, ADJ, METAL 1K
R814 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R815 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R816 1-218-764-11 s METAL, CHIP 330K 0.50% 1/10W R817 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R818 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W	RV702 1-228-459-00 s RES, ADJ, METAL 10K RV703 1-228-459-00 s RES, ADJ, METAL 10K RV704 1-228-471-00 s RES, ADJ, METAT 1K RV705 1-228-477-00 s RES, ADJ, METAL 100K RV706 1-228-477-00 s RES, ADJ, METAL 100K
R819 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R820 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R821 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R822 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R823 1-218-764-11 s METAL, CHIP 330K 0.50% 1/10W	RV707 1-228-477-00 s RES, ADJ, METAL 100K RV708 1-228-463-00 s RES, ADJ, METAL 200K RV709 1-228-463-00 s RES, ADJ, METAL 200K RV710 1-228-463-00 s RES, ADJ, METAL 200K RV711 1-228-459-00 s RES, ADJ, METAL 10K
R824 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W R825 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W R826 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W R827 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W R828 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W	RV712 1-228-459-00 s RES. ADJ, METAL 10K RV713 1-228-462-00 s RES. ADJ, METAL 100K RV714 1-228-459-00 s RES. ADJ, METAL 10K RV715 1-228-459-00 s RES. ADJ, METAL 10K RV716 1-228-459-00 s RES. ADJ, METAL 10K
R829 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W R830 1-218-764-11 s METAL. CHIP 330K 0.50% 1/10W R831 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W R832 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W R833 1-216-699-11 s METAL. CHIP 100K 0.5% 1/10W	RV717 1-228-462-00 s RES, ADJ, METAL 100K RV718 1-228-459-00 s RES, ADJ, METAL 10K RV719 1-228-459-00 s RES, ADJ, METAL 10K RV720 1-228-459-00 s RES, ADJ, METAL 10K RV721 1-228-462-00 s RES, ADJ, METAL 100K
R834 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R835 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W R836 1-218-760-11 s METAL, CHIP 220K 0.50% 1/10W R837 1-218-760-11 s METAL, CHIP 220K 0.50% 1/10W R838 1-218-760-11 s METAL, CHIP 220K 0.50% 1/10W	RV722 1-228-459-00 s RES, ADJ, METAL 10K RV723 1-228-460-00 s RES, ADJ, METAL 20K RV724 1-228-460-00 s RES, ADJ, METAL 20K RV725 1-228-462-00 s RES, ADJ, METAL 100K RV726 1-228-460-00 s RES, ADJ, METAL 20K
R839 1-218-760-11 s METAL. CHIP 220K 0.50% 1/10W R840 1-218-755-11 s METAL. CHIP 130K 0.50% 1/10W R841 1-218-760-11 s METAL. CHIP 220K 0.50% 1/10W R842 1-218-760-11 s METAL. CHIP 220K 0.50% 1/10W R843 1-218-760-11 s METAL. CHIP 220K 0.50% 1/10W	RV727 1-228-460-00 s RES, ADJ, METAL 20K RV728 1-228-460-00 s RES, ADJ, METAL 20K RV729 1-228-462-00 s RES, ADJ, METAL 100K RV730 1-228-460-00 s RES, ADJ, METAL 20K RV731 1-228-460-00 s RES, ADJ, METAL 20K
R844 1-218-760-11 s METAL. CHIP 220K 0.50% 1/10W R845 1-218-755-11 s METAL. CHIP 130K 0.50% 1/10W R846 1-218-760-11 s METAL. CHIP 220K 0.50% 1/10W R847 1-218-760-11 s METAL. CHIP 220K 0.50% 1/10W R848 1-218-760-11 s METAL. CHIP 220K 0.50% 1/10W	RV732 1-228-460-00 s RES, ADJ, METAL 20K RV733 1-228-462-00 s RES, ADJ, METAL 100K RV734 1-228-460-00 s RES, ADJ, METAL 20K S701 1-570-857-11 s SWITCH, SLIDE
R849 1-218-760-11 s METAL, CHIP 220K 0.50% 1/10W 1-218-755-11 s METAL, CHIP 130K 0.50% 1/10W	
RV100 1-228-472-00 s RES, ADJ, METAL 2K RV101 1-228-457-00 s RES, ADJ, METAL 2K RV102 1-228-462-00 s RES, ADJ, METAL 100K RV103 1-228-462-00 s RES, ADJ, METAL 100K RV104 1-228-461-00 s RES, ADJ, METAL 50K	
RV105 1-228-476-00 s RES, ADJ, METAL 50K RV106 1-228-462-00 s RES, ADJ, METAL 100K RV300 1-228-472-00 s RES, ADJ, METAL 2K RV302 1-228-462-00 s RES, ADJ, METAL 100K RV303 1-228-462-00 s RES, ADJ, METAL 100K	
RV304 1-228-461-00 s RES, ADJ, METAL 50K RV305 1-228-476-00 s RES, ADJ, METAL 50K RV306 1-228-462-00 s RES, ADJ, METAL 100K RV500 1-228-472-00 s RES, ADJ, METAL 2K RV501 1-228-457-00 s RES, ADJ, METAL 2K	
RV502 1-228-462-00 s RES, ADJ, METAL 100K	

D-69

FILTER UNIT BLOCK	(FILTER UNIT BLOCK)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
1-547-405-11 o UNIT. FILTER 1-547-406-11 o DRIVER, SURVO	R23 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R24 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
C1	R25
C6	R34
C11 1-164-232-11 s CERAMIC CHIP 0.01 10% 50V C12 1-164-232-11 s CERAMIC CHIP 0.01 10% 50V	R39
CN1 1-506-487-11 o CONNECTOR, 8P, MALE CN2 1-506-489-11 o CONNECTOR, 10P, MALE	R41
D1 8-719-105-63 s DIODE RD4.3M-B1 D2 8-719-105-63 s DIODE RD4.3M-B1 D3 8-719-105-63 s DIODE RD4.3M-B1 D4 8-719-105-63 s DIODE RD4.3M-B1	R44 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R45 1-216-107-00 s METAL 270K 5% 1/10W R46 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R47 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R48 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
IC1 8-759-009-06 s IC MC14052BF IC2 8-759-928-08 s IC TLC27M4CNS IC3 8-759-009-06 s IC MC14052BF IC4 8-759-928-08 s IC TLC27M4CNS IC5 8-759-928-08 s IC TLC27M4CNS IC6 8-759-982-21 s IC RC78L05A	R49 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R50 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R51 1-216-651-11 s METAL CHIP 10K 0.50% 1/10W R52 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R53 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W
L1	R54 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R55 1-216-675-11 s METAL CHIP 1OK 0.50% 1/10W R56 1-216-675-11 s METAL CHIP 1OK 0.50% 1/10W R57 1-216-627-11 s METAL CHIP 1OK 0.50% 1/10W R58 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R59 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W
Q1 8-729-159-64 s TRANSISTOR 2SD596 Q2 8-729-162-43 s TRANSISTOR 2SB624-BV3 Q3 8-729-159-64 s TRANSISTOR 2SD596 Q4 8-729-162-43 s TRANSISTOR 2SB624-BV3 Q5 8-729-159-64 s TRANSISTOR 2SD596	RV1 1-228-456-00 s RES, ADJ, METAL IK RV2 1-228-456-00 s RES, ADJ, METAL IK RV3 1-228-456-00 s RES, ADJ, METAL IK RV4 1-228-456-00 s RES, ADJ, METAL IK RV5 1-228-456-00 s RES, ADJ, METAL IK
06 8-729-162-43 s TRANSISTOR 2SB624-BV3 07 8-729-159-64 s TRANSISTOR 2SD596 08 8-729-162-43 s TRANSISTOR 2SB624-BV3	RV6 1-228-456-00 s RES, ADJ, METAL 1K RV7 1-228-456-00 s RES, ADJ, METAL 1K RV8 1-228-456-00 s RES, ADJ, METAL 1K
R5 1-216-627-11 s METAL CHIP 100 0.50% 1/10W R6 1-216-656-11 s METAL CHIP 1.6K 0.5% 1/10W R7 1-216-656-11 s METAL CHIP 1.6K 0.5% 1/10W R8 1-216-656-11 s METAL CHIP 1.6K 0.5% 1/10W R9 1-216-627-11 s METAL CHIP 100 0.50% 1/10W	S1 1-571-098-11 s SWITCH, SLIDE
R10 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R11 1-216-699-11 s METAL CHIP 100K 0.50% 1/10W R12 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R13 1-216-651-11 s METAL CHIP 1K 0.50% 1/10W R14 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	
R15 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R16 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R17 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R18 1-216-107-00 s METAL 270K 5% 1/10W R19 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	
R20 1-216-673-11 s METAL CHIP 8.2K 0.50% 1/10W R21 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W R22 1-216-675-11 s METAL CHIP 10K 0.50% 1/10W	

FRAME
Ref. No. or Q'ty Part No. SP Description
▲1-532-284-00 s FUSE, TIME-LAG 630mA 250V ▲1-532-325-00 s FUSE, TIME-LAG 6.3A 125V ▲1-532-598-00 s FUSE, GLASS TUBE 4A 125V
1-547-391-11 o FILTER UNIT. LOW PASS (3)
1-547-403-11 o GLASS UNIT, DUMMY *) (FOR CCD UNIT W/BLOCK NO: SAXXXXXP)
1-562-148-11 o HOUSING, 3P (FOR TEMP) 1-563-088-11 o CONTACT, FEMALE, AWG24-30
1-562-153-11 o HOUSING, 8P (FOR PRISM BLOCK) 1-563-088-11 o CONTACT, FEMALE, AWG24-30
8-759-947-34 s IC LM35DZ (BIAS)
1-636-289-11 o PRINTED CIRCUIT BOARD, CN-522 C101 1-102-363-00 s CAP, CERAMIC 1000PF C102 1-102-363-00 s CAP, CERAMIC 1000PF
CN1F (to CN-261 board) 1-562-666-11 o HOUSING, 5P 1-560-764-21 o CONTACT, FEMALE, AWG18-24
CNIF (to CN-390 board) 1-563-126-11 o HOUSING, 24P 1-563-115-11 o CONTACT, FEMALE, AWG24-28
CNIF (to CN-391 board) 1-563-122-11 o HOUSING, 16P 1-563-115-11 o CONTACT, FEMALE, AWG24-28
CNIF (to CN-451 board L/R) 1-562-147-11 o HOUSING, 2P 1-563-088-11 o CONTACT, FEMALE, AWG24-30
CNIF (to LF-15 board) 1-561-876-00 o HOUSING, 3P 1-560-764-21 o CONTACT, FEMALE, AWG18-24
CNIF (to PA-102 BOARD) 1-562-155-11 o HOUSING, 10P 1-563-088-11 o CONTACT, FEMALE, AWG24-30
CN1F (to PS-192 board) 1-562-287-11 o HOUSING, 6P 1-562-210-11 o CONTACT, FEMALE, AWG22-18
CNIF (to PS-198 board) 1-562-640-11 o HOUSING, 8P 1-562-210-11 o CONTACT, FEMALÉ, AWG22-18
CNIF (to SW-386 board) 1-562-150-11 o HOUSING, 5P 1-563-088-11 o CONTACT, FEMALE, AWG24-30
CN1F (to SW-387 board) 1-562-148-11 o HOUSING, 3P 1-563-088-11 o CONTACT, FEMALE, AWG24-30
CNIF (to SW-388 board) 1-563-127-11 o HOUSING, 26P 1-563-115-11 o CONTACT, FEMALE, AWG24-28
CN1F (to SW-389 board) 1-563-129-11 o HOUSING, 30P 1-563-115-11 o CONTACT, FEMALE, AWG24-28

(FRAME) Ref. No. or Q'ty Part No. SP Description CN1F (to TG-62P board) 1-562-151-11 o HOUSING, 6P 1-563-088-11 o CONTACT, FEMALE, AWG24-30 CN2F (to CN-390 board) 1-562-148-11 o HOUSING, 3P 1-563-088-11 o CONTACT, FEMALE, AWG24-30 CN2F (to LF-15 board) 1-562-147-11 o HOUSING, 2P 1-563-088-11 o CONTACT, FEMALE, AWG24-30 CN2F (to PS-198 board) 1-562-883-11 o HOUSING, 7P 1-562-210-11 o CONTACT, FEMALE. AWG22-18 CN2F (to TG-62P board) $\begin{array}{c} 1-562-155-11 \text{ o HOUSING, } 10P \\ 1-563-088-11 \text{ o CONTACT, } \text{FEMALE, } \text{AWG24-30} \end{array}$ CN3F (to CN-390 board) 1-562-148-11 o HOUSING, 3P 1-563-088-11 o CONTACT, FEMALE, AWG24-30 CN3F (to DR-103 board) $\begin{array}{c} 1-562-155-11 \text{ o HOUSING, } 10P \\ 1-563-088-11 \text{ o CONTACT, } FEMALE. \text{ AWG24-30} \end{array}$ CN3F (to FL-86 board) 1-575-400-11 o CABLE ASSY, RF CN3F (to PS-198 board) 1-562-286-11 o HOUSING, 5P 1-562-210-11 o CONTACT, FEMALE, AWG22~18 CN3F (to SW-389 board) 1-562-152-11 o HOUSING, 7P 1-563-088-11 o CONTACT, FEMALE, AWG24-30 CN4F (to PS-198 board) 1-562-287-11 o HOUSING, 6P 1-562-210-11 o CONTACT, FEMALE, AWG22-18 CN4F (to SW-388 board) 1-562-147-11 o HOUSING, 2P 1-563-088-11 o CONTACT, FEMALE, AWG24-30

(FRAME)	(FRAME)
Ref. No. or Q'ty Part No. SP Description	Ref. No. or Q'ty Part No. SP Description
CN4F (to SW-389 board) 1-562-147-11 o HOUSING, 5P 1-563-088-11 o CONTACT, FEMALE, AWG24-30	CN2OF (to MB-270 board) 1-563-118-11 o HOUSING, 8P 1-563-115-11 o CONTACT, FEMALE, AWG24-28
CN5F (to CN-261 board) 1-562-666-11 o HOUSING, 5P 1-560-764-11 o CONTACT, FEMALE, AWG18-24	CN21F(to MB-270 board) 1-563-123-11 o HOUSING, 18P 1-563-115-11-o-CONTACT, FEMALE, AWG24-28
CNSF (to PS-198 board) 1-563-120-11 o HOUSING, 12P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	CN22F (to MB-270 board) 1-563-125-11 o HOUSING, 22P 1-563-115-11 o CONTACT, FEMALE, AWG24-28
CNGF (to CN-390 board) 1-562-147-11 o HOUSING, 2P 1-563-088-11 o CONTACT, FEMALE, AWG24-30	CN23F (to MB-270 board) 1-563-118-11 o HOUSING, 8P
CN6F (to PS-198 board) 1-563-117-11 o HOUSING, 6P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	Î-563-115-11 o CONTACT, FEMALE, AWG24-28 CN24F (to MB-270 board) 1-563-126-11 o HOUSING, 24P 1-563-115-11 o CONTACT, FEMALE, AWG24-28
CN7F (to CN-390 board) 1-562-147-11 o HOUSING, 2P 1-563-088-11 o CONTACT, FEMALE, AWG24-30	1-563-115-11 o CUNTACT, FEMALE, AWG24-28 CN25F (to MB-270 board) 1-563-119-11 o HOUSING, 10P 1-563-115-11 o CONTACT, FEMALE, AWG24-28
CN7F (to PS-198 board) 1-563-118-11 o HOUSING, 8P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	CN101 1-562-889-11 s CONNECTOR, AC 3P "AC OUT" CN102 1-569-253-21 s CONNECTOR, BNC "MONITOR OUT"
CN8F (to PS-198 board) 1-563-125-11 o HOUSING, 22P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	CN103
CN10F (to MB-270 board) 1-563-128-11 o HOUSING, 28P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	CN201 1-561-844-00 s CONNECTOR, COAXIAL, FEMALE TRIAX "CCU" CN202 1-565-656-11 o CONNECTOR, COAXIAL (2.5C)
CN11F (to MB-270 board) 1-563-126-11 o HOUSING, 24P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	CN301 1-945-163-11 o HARNESS (VF) 1-562-989-11 s CONNECTOR, MULTI 25P, FEMALE 1-562-580-11 s CONTACT, FEMALE, AWG24-28
CN12F (to MB-270 board) 1-563-118-11 o HOUSING, 8P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	CN302 1-509-892-31 o CONNECTOR, 36P, FEMALE "LENS" D101 8-719-907-03 s D10DE BD703G "POWER"
CN13F (to MB-270 board) 1-563-116-11 o HOUSING, 4P 1-563-088-11 o CONTACT, FEMALE, AWG24-30	J101 1-507-676-00 s JACK PHONE "INCOM1" J102 1-507-676-00 s JACK PHONE "PCM1" J103 1-507-676-00 s JACK PHONE "INCOM2" J104 1-507-676-00 s JACK PHONE "PCM2"
CN14F (to MB-270 board) 1-563-118-11 o HOUSING, 8P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	\$101
CN15F (to MB-270 board) 1-563-129-11 o HOUSING, 30P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	5108 1-570-171-12 s 5W11CH, PUSH (1 NRY) CURSUR
CN16F (to MB-270 board) 1-563-122-11 o HOUSING, 16P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	\$109
CN17F (to MB-270 board) 1-563-118-11 o HOUSING, 8P 1-563-115-11 o CONTACT, FEMALE, AWG24-28	
CN19F (to MB-270 board) 1-563-116-11 o HOUSING, 4P 1-563-088-11 o CONTACT, FEMALE, AWG24-30	

PACKING MATERIALS & SUPPLIED ACCESSORIES

 Ipc
 ♣1-532-325-00 s FUSE, TIME-LAG 6.3A 125V

 3pcs
 ♣1-532-598-00 s FUSE, GLASS TUBE 4A 125V

 1pc
 1-560-078-00 s CONNECTOR, 6P, MALE 1-560-155-00 s CONNECTOR, 4P, MALE

 2pcs
 2-280-511-01 o BRACKET, ADJUSTMENT, ANGLE